SSC CHSL 2020 Official Paper 19 (Held on: 5 Aug 2021 Shift 1) (Previous Year Paper)

SSC Combined Higher Secondary Level (CHSL) • 2020 • 100 questions • 60 minutes • Answer key and solutions

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ENGLISH LANGUAGE

Q1. Select the INCORRECTLY spelt word.

(a) Possesions
(b) Irritation
(c) Protection
(d) Invitation

Q2. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution required'.

India has identified a nose-based vaccine against Covid-19 that could be a ‘game-changer’.

(a) No substitution required
(b) a nasal vaccine
(c) a sense-based vaccine
(d) an aural vaccine

Q3. Select the option that can be used as a one-word substitute for the given group of words.

The branch of physics concerned with the properties of sound

(a) Optics
(b) Acoustics
(c) Photonics
(d) Mechanics

Q4. Select the most appropriate synonym of the given word.

Despicable

(a) Laudable
(b) Commendable
(c) Desirable
(d) Contemptible

Q5. Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select ‘No substitution required’.

Lavanya was happy to see that the tree they had planted the previous year has grow quite taller.

(a) had grown quite tall
(b) had grow quite taller
(c) No substitution required
(d) had grown quite tallest

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Q6. Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the right order to form a meaningful and coherent paragraph.

A. As a result, he had a debt of 500 million US dollars at the time of his death.

B. Unfortunately, he began spending lavishly on anything he desired, not what he actually needed.

C. Michael Jackson, called the 'King of Pop Music', stayed at the top of his career for many years.

D. He was respected for his work culture; he would spend long nights at the studio to fix a note correctly in a song.

(a) DBAC
(b) BADC
(c) ADCB
(d) CDBA

Q7. Select the most appropriate meaning of the given idiom.

Thick as thieves

(a) Being very dishonest
(b) Never helping anyone
(c) Telling lies all the time
(d) Having a close friendship

Q8. Select the most appropriate ANTONYM of the given word.

Accustomed

(a) Unusual
(b) Terrific
(c) Ordinary
(d) Fabulous

Q9. Select the option that expresses the given sentence in passive voice.

Sai Kumari gave Akhila a bouquet of lilies on her birthday.

(a) Akhila was gave a bouquet of lilies on her birthday by Sai Kumari.
(b) Akhila is given a bouquet of lilies on her birthday by Sai Kumari.
(c) Akhila gave a bouquet of lilies on her birthday to Sai Kumari.
(d) Akhila was given a bouquet of lilies on her birthday by Sai Kumari.

Q10. Select the most appropriate word to fill in the blank.

His voice was _____ by the sound of the helicopter.

(a) drowned
(b) drawn
(c) dawned
(d) driven

Q11. Select the option that expresses the given sentence in direct speech.

The students asked the teacher where they could find the information for their project

(a) The teacher said to the students, "Where you can find the information for your project."
(b) The students said to the teacher, "Where can you find the information for our project?"
(c) The students asked the teacher, "Where can we find the information for our project?"
(d) The teacher said to the students, "I will tell you where you can find the information for your project."

Q12. Select the most appropriate synonym of the given word.

Forbid

(a) Encourage
(b) Prohibit
(c) Close
(d) Adieu

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Q13. The following sentence has been divided into parts. One of them may contain an error. Select the part that contains the error from the given options. If you don't find any error, mark 'No error' as your answer.

A probe has been ordered / by the incident / that occurred at the celebration.

(a) by the incident
(b) that occurred at the celebration
(c) A probe has been ordered
(d) No error

Q14. Select the INCORRECTLY spelt word.

(a) Evidence
(b) Hautily
(c) Discussion
(d) Resolute

Q15. Sentences of a paragraph are given below in jumbled order. Arrange the sentences in the right order to form a meaningful and coherent paragraph.

A. Humans work because they have to; they play because they want to.

B. The most useful definitions are those that clarify the relationship of sports to play, games and contests.

C. "Play," wrote the German theorist Carl Diem, "is purposeless activity, for its own sake, the opposite of work."

D. Sports are part of every culture, past and present, but each culture has its own definition of sports.

(a) BADC
(b) ABCD
(c) DBCA
(d) DCBA

Q16. The following sentence has been split into four segments. Identify the segment that contains a grammatical error.

The sports day events / will be conducted / from 3:30 p.m. and 5:30 p.m. / on Saturday.

(a) The sports day events
(b) will be conducted
(c) from 3:30 p.m. and 5:30 p.m.
(d) on Saturday

Q17. Select the option that can be used as a one-word substitute for the given group of words.

A new project or business activity involving some risk

(a) Entrepreneur
(b) Venture
(c) Experiment
(d) Taboo

Q18. Select the most appropriate meaning of the given idiom.

To have eggs on one's face

(a) To throw eggs on a speaker's face
(b) To apply egg yolk on one's face for making it look beautiful
(c) To be embarrassed because of one's action
(d) To buy eggs and break them

Q19. Select the most appropriate ANTONYM of the given word.

Disheveled

(a) Ordered
(b) Untidy
(c) Unkempt
(d) Cluttered

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Q20. Select the most appropriate word to fill in the blank.

Today you may not _____ what you hear, but that is the truth and you have to accept it.

(a) like
(b) answer
(c) enjoy
(d) reply

Directions

In the following passage, some words have been deleted. Select the most appropriate option to fill in each blank.

Meghalaya, a hilly state of India, is located in the northeastern part of the country. It is (1)____ by the Indian state of Assam in the north and northeast and (2) __ Bangladesh in the south and southwest. The state capital is (3) __ hill town of Shillong, located in east central Meghalaya. Meghalaya is an upland area formed by a (4)__ block of the Deccan plateau. Its summits vary in (5) ____ from 4,000 to 6,000 feet (1,220 to 1,830 metres).

Q21. Select the most appropriate option to fill in blank no.1.

(a) bind
(b) bounding
(c) bounded
(d) bonded

Q22. Select the most appropriate option to fill in blank no.2.

(a) near
(b) by
(c) with
(d) beside

Q23. Select the most appropriate option to fill in blank no.3.

(a) only
(b) the
(c) one
(d) a

Q24. Select the most appropriate option to fill in blank no.4.

(a) removed
(b) detached
(c) standing
(d) withdrawn

Q25. Select the most appropriate option to fill in blank no.5.

(a) increase
(b) distance
(c) rise
(d) elevation

GENERAL INTELLIGENCE

Q26. Which two digits and signs need to be interchanged so as to balance the given equation?

65 + 13 − 119 ÷ 32 × 8 = 175

(a) 9 and 8; + and ÷
(b) 2 and 9; + and ×
(c) 8 and 3; × and ÷
(d) 5 and 8; − and ×

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Q27. Select the option that is related to the third term in the same way as the second term is related to the first term.

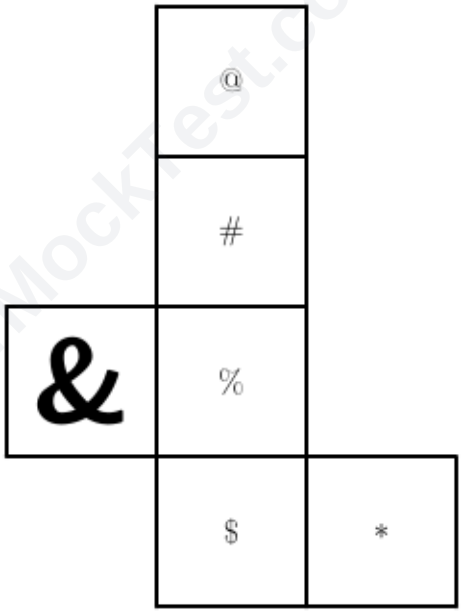
OUTSTAY : AOSTTUY :: ROUGHLY : ?

(a) ORGULHY
(b) GHLORUY
(c) GUROHLY
(d) GUORYLH

Q28. In a certain code language, EXTREME is written as VCGIVNV. How will INITIAL be written in that language?

(a) SNRGSAO
(b) RMRGRZO
(c) RMSHRZP
(d) SMSGSZP

Q29. A cube is made by folding the given sheet. In the cube so formed, what would be the symbol on the opposite side of '$' ?



(a) *
(b) &
(c) @
(d) #

Q30. Select the option that is related to the third word in the same way as the second word is related to the first word.

Flock : Sheep :: Crowd : ?

(a) Fish
(b) Fly
(c) Swans
(d) Human

Q31. Select the correct option that indicates the arrangement of the given words in the order in which they appear in an English dictionary.

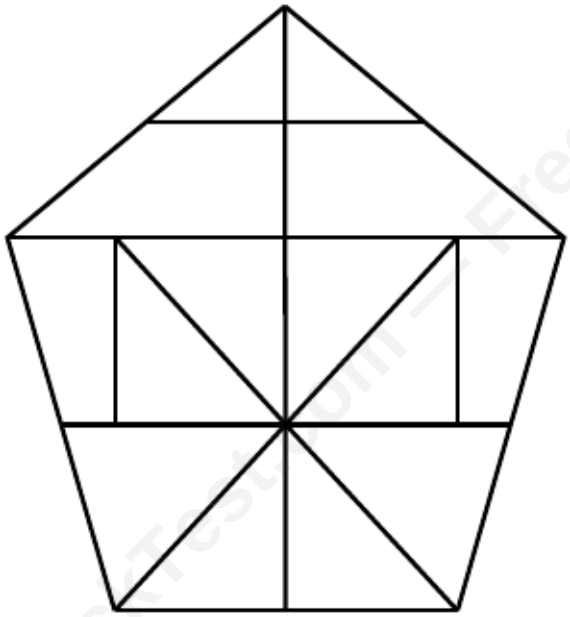
1. Inhaler
2. Inimitable
3. Inhabitant
4. Ingenuous
5. Inheritance

(a) 4, 1, 3, 5, 2
(b) 4, 3, 1, 5, 2

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(c) 4, 3, 5, 1, 2
(d) 4, 5, 2, 1, 3

Q32. Find the number of triangle in the given figure.



(a) 18
(b) 19
(c) 16
(d) 17

Q33. Select the option in which the numbers are related in the same way as are the numbers of the following set.

47 : 58 : 71

(a) 68 : 80 : 88
(b) 72 : 81 : 90
(c) 89 : 98 : 106
(d) 76 : 89 : 105

Q34. Four options have been given, out of which three are alike in some manner and one is different. Select the option that is different.

(a) Sri Lanka
(b) Bangladesh
(c) Singapore
(d) Indonesia

Q35. Select the combination of letters that when sequentially placed in the blanks of the given letter series will complete the series.

k j i _ k _ _ i k j i _ k _ _ i

(a) k i j k i i
(b) i j i i j i
(c) j k j k j k
(d) i k j i k i

Q36. Study the given pattern carefully and select the number that can replace the question mark (?) in it.

13	**50**	**8**
12	39	5
15	51	?

(a) 12
(b) 10
(c) 7
(d) 9

Q37. Select the option in which the words share the same relationship as that shared by the given pair of words.

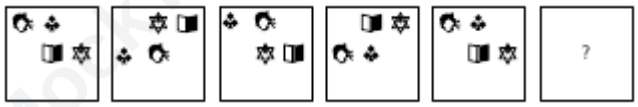
Mosquito : Swarm

(a) Snake : Sleuth
(b) Cat : Murder
(c) Monkey : Pride
(d) Shark : School

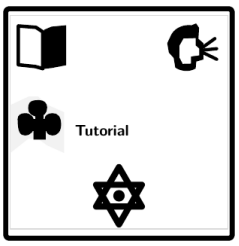
Q38. Ruchi's husband's grandfather is Abhinav, whose grandson's father is Viyan. If Abhinav and his wife have only one son, how is Viyan related to Ruchi's husband?

(a) Father
(b) Brother-in-law
(c) Cousin
(d) Uncle

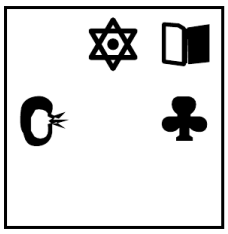
Q39. Select the figure from among the given options that can replace the question mark (?) in the following series.



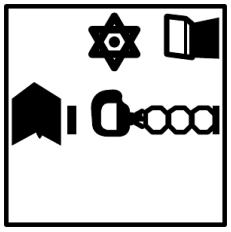
(a)



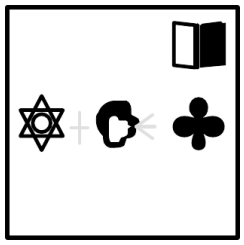
(b)



(c)



(d)



Q40. In a certain code language, VICTORY is coded as 29472435 and HASTY is coded as 278119. How will SUBLIME be coded in that language?

(a) 2143152558
(b) 1213141585
(c) 1514131285
(d) 2134152558

Q41. The District Transport Authority has started special bus services for college going students. One bus starts from village P. The number of girls in the bus is one-fourth of the number of boys. In village Q, 20 boys leave the bus at their college stop and ten girls enter the bus. Now the number of boys and girls is equal. How many students enter the bus in the beginning?

(a) 50
(b) 40
(c) 30
(d) 60

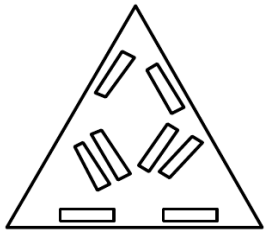
Q42. Four letter-clusters have been given, out of which three are alike in some manner and one is different. Select the letter-cluster that is different.

(a) TXBV
(b) GKPJ
(c) QUFZ
(d) KOLF

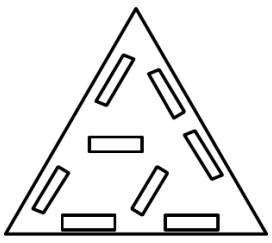
Q43. The sequence of folding a piece of paper and the manner in which the folded paper has cut is shown in the following figures. How would this paper look when unfolded ?



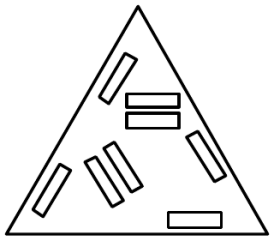
(a)



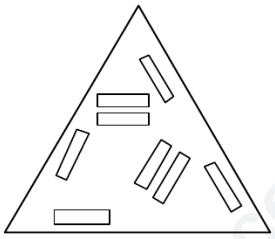
(b)



(c)



(d)

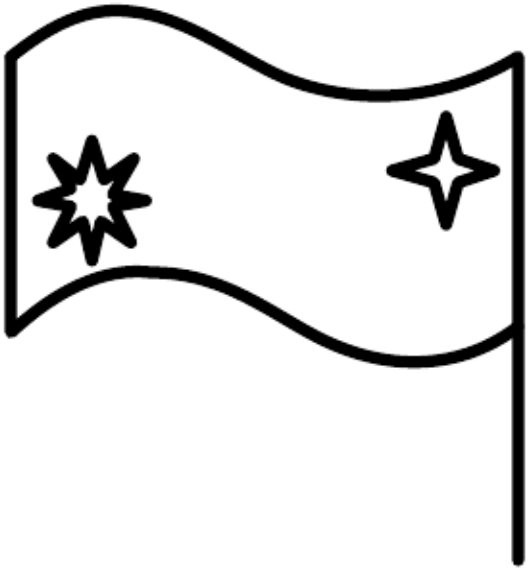


Q44. Select the option that is related to the third number in the same way as the second number is related to the first number.

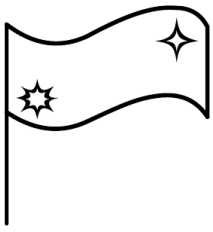
18 : 163 : : 24 : ?

(a) 216
(b) 289
(c) 222
(d) 298

Q45. Select the correct mirror image of the given figure when the mirror is placed at the right side.

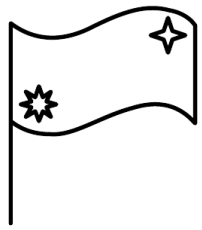


(a)

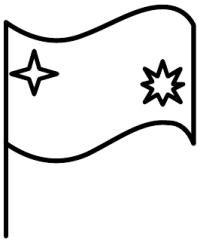


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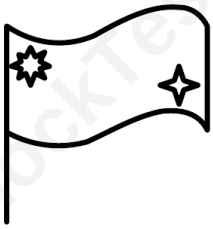
(b)



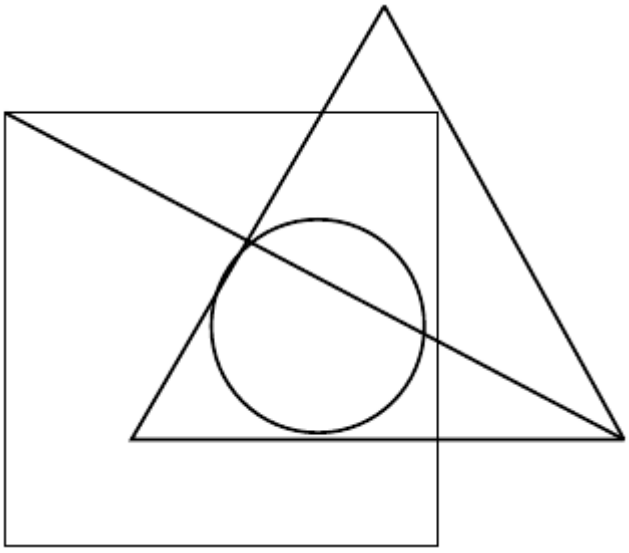
(c)



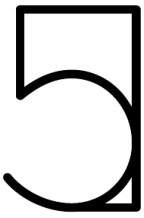
(d)



Q46. Select the option that is embedded in the given figure (rotation is NOT allowed).

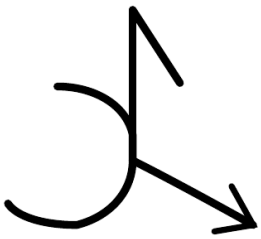


(a)

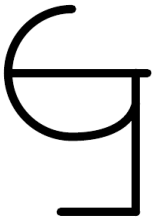


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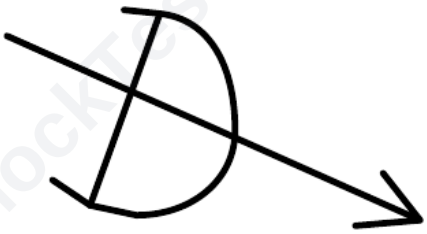
(b)



(c)



(d)



Q47. Select the number from among the given options that can replace the question mark (?) in the following series.

71, 56, 44, 35, 29, ?

(a) 29
(b) 26
(c) 23
(d) 20

Q48. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements.

Statements:

Some dogs are bulls.

All bulls are donkeys.

Conclusions:

I. All dogs are donkeys.

II. Some donkeys are dogs.

(a) Only conclusion I follows.
(b) Both conclusions I and II follow.
(c) Neither conclusion I nor II follows.
(d) Only conclusion II follows

Q49. Four numbers have been given, out of which three are alike in some manner and one is different. Select the number that is different.

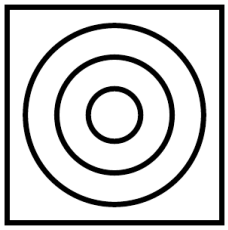
(a) 308
(b) 137
(c) 229
(d) 463

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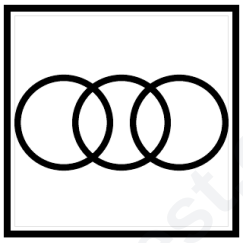
Q50. Select the Venn diagram that best represents the relationship between the following classes.

Statistician, Men, Pathologists

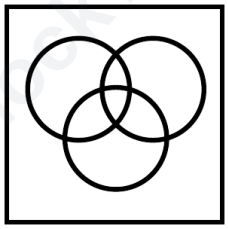
(a)



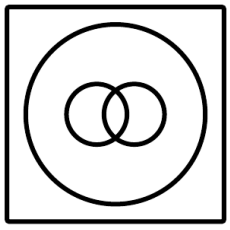
(b)



(c)



(d)



QUANTITATIVE APTITUDE

Q51. If tan x = cot (48° + 2x), and 0° < x < 90°, then what is the value of x?

(a) 12°
(b) 14°
(c) 16°
(d) 21°

Q52. The value of (tan 50° + sec 50°)/(cot 40° + cosec 40°) + cos² 65° + sin 65° cos 25° + tan 30° is

(a) 1 + √ 3
(b) (6 + √ 3)/3
(c) {√ 3(√ 3 +1)}/3
(d) 2 + √ 3

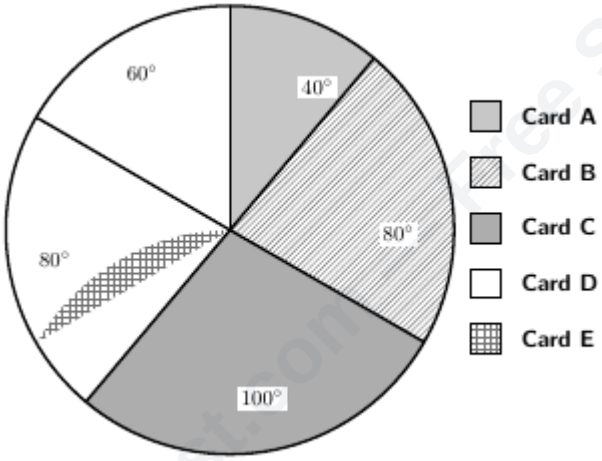
Q53. In an isosceles triangle ABC, AB = AC and AD is perpendicular to BC. If AD = 12 cm and the perimeter of ΔABC is 36 cm, then the length of BC (in cm) is

(a) 13
(b) 10

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(c) 12
(d) 5

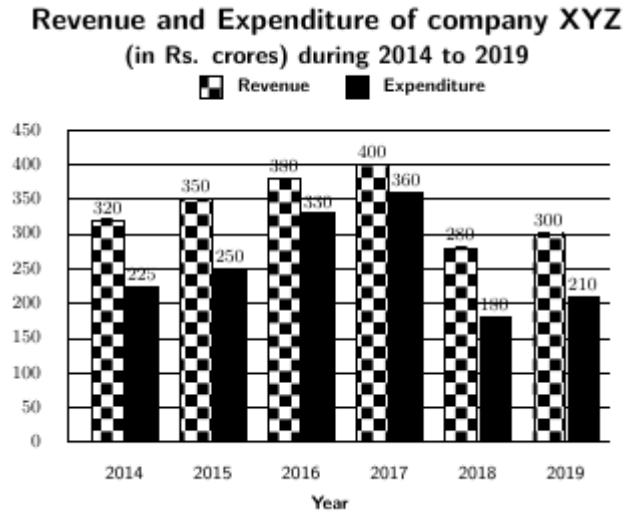
Q54. The pie chart shows the money spent by Aditya through credit cards of different banks. The total money spent by him through credit cards in a year is Rs. 3,60,000.



How much more money was spent through Card C as compared to Card D?

(a) Rs. 20,000
(b) Rs. 2,000
(c) Rs. 40,000
(d) Rs. 1,80,000

Q55. Study the given graph and answer the question that follows.



The total revenue of the company in 2014, 2016, and 2018 is what percentage of the total expenditure in 2015 to 2017 and 2019 (correct to one decimal place)?

(a) 81.6%
(b) 83.4%
(c) 84.3%
(d) 85.2%

Q56. A person sold an article at a loss of 12%. Had he sold it at a gain of 10.5%, he would have got Rs. 112.50 more. What is the original selling price (in Rs.) of the article?

(a) 440.00
(b) 560.00
(c) 500.00
(d) 552.50

Q57. Two successive discounts each of x % on the marked price of an article are equal to a single discount of Rs. 350. If the marked price of the article is Rs. 800, then the value of x is:

(a) 25%
(b) 20%
(c) 22.5%
(d) 27.5%

Q58. The simple interest on a sum of Rs. 8,000 at a certain rate per cent per annum for 3 years is Rs. 3,600. What will be the amount (in Rs.) of the same sum after 2 years at the same rate, if the interest is compounded 8-monthly?

(a) 10,580
(b) 10,648
(c) 11,239
(d) 10,450

Q59. The coefficient of $x^3 y$ in $(x - 2y) \times (5x + y)^3$ is:

(a) 75
(b) -175
(c) 250
(d) -150

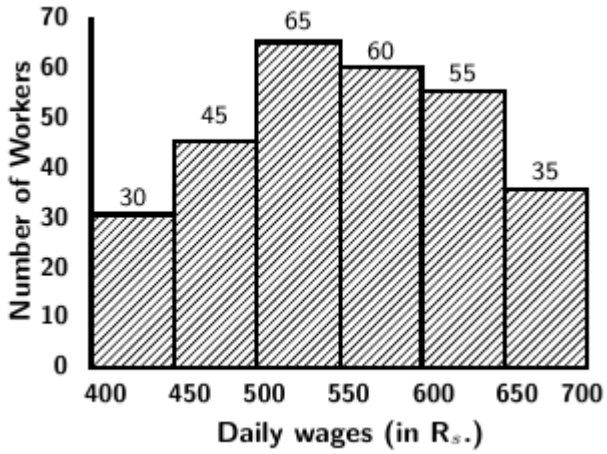
Q60. The value of 5/4× 2 2/3÷ 5/9 of 11/5+2/25× 4 1/6÷ 2/7 of 2 1/3 is:

(a) 11/2
(b) 21/2
(c) 51/2
(d) 31/2

Q61. A bag contains coins of denomination of Rs. 1, Rs. 2 and Rs. 5 in the ratio of 4 : 5 : 8. If the total value of these coins is Rs. 432, then what is the number of Rs. 2 coins?

(a) 60
(b) 30
(c) 50
(d) 40

Q62. Study the given graph which shows the number of workers with their wages and answer the question that follows.



What is the ratio of the total number of workers whose daily wages are Rs. 450 or above but less than Rs. 500 to the total number of workers whose daily wages are Rs. 650 or above?

(a) 7 : 9
(b) 2 : 5
(c) 5 : 2
(d) 9 : 7

Q63. A can complete a work in 20 days, while B can complete the same work in 25 days. Both worked together for 10 days and then C alone completed the remaining work in 10 days. In how many days will A, B and C together complete the same work?

(a) 12 days
(b) 8 days
(c) 5 days
(d) 10 days

Q64. A chord PQ of a circle C1 of radius 9.25 cm touches another circle C2 that is concentric to C1, and the radius of C2 is 3 cm. What is the length (in cm) of PQ?

(a) 12
(b) 19.5
(c) 17.5
(d) 15

Q65. The average height of a certain number of students in a group is 155.6 cm. If 12 students having an average height of 150.5 cm join the group and 7 students having an average height of 159 cm leave the group, the average height of the students in the group will decrease by 34 mm. What is the number of students, initially, in the group?

(a) 20
(b) 25
(c) 40
(d) 30

Q66. If $x + y + z = 13$, $x^2 + y^2 + z^2 = 91$ and $xz = y^2$, then the difference between z and x is:

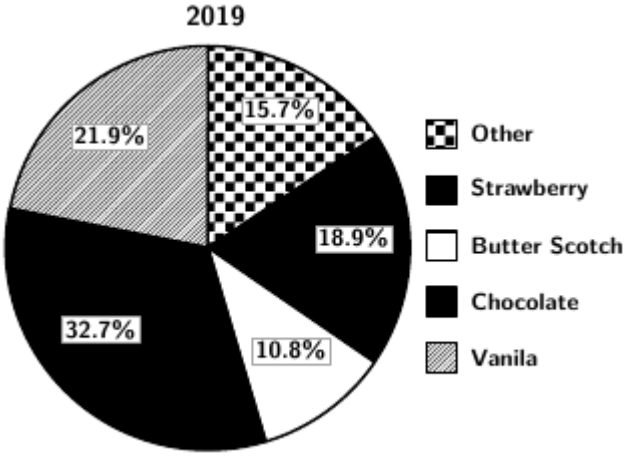
(a) 5
(b) 9
(c) 8
(d) 3

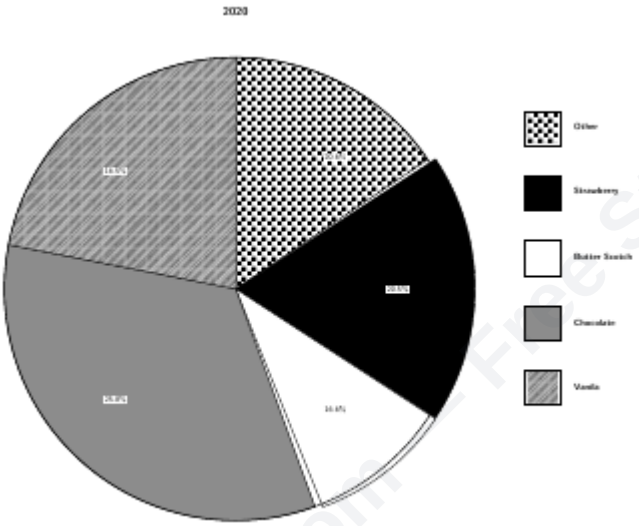
Q67. In a circle, AB and DC are two chords. When AB and DC are produced, they meet at P. If PC = 2.8 cm, PB = 3.15 cm and AB = 3.85 cm, then CD = ?

(a) 6.975 cm
(b) 5.075 cm
(c) 4.175 cm
(d) 7.875 cm

Q68. Study the given pie-charts and answer the question that follows.

The pie charts represent the popularity of ice-cream flavors among families in the years 2019 and 2020.





If 1% increase resulted in annual additional sales of Rs. 10,000, then how much (in Rs.), did the combined strawberry, other and Butterscotch sales increase from 2019 to 2020?

(a) 1,23,000
(b) 1,32,000
(c) 2,13,000
(d) 3,12,000

Q69. The speed of a train is 78 km/h. It crosses a tunnel in 45 s and overtakes a person walking at a speed of 6 km/h, in the same direction, in 15 s. The length (in m) of the tunnel is:

(a) 650
(b) 780
(c) 675
(d) 975

Q70. The radius of a sphere is 9 cm. It is melted and drawn into a wire of radius 0.3 cm. The length of the wire is:

(a) 118 m
(b) 108 m
(c) 112 m
(d) 106 m

Q71. In ΔXYZ, P is the midpoint of side XZ and Q is a point on side XY such that QZ bisects PY. If XQ = 24 cm, then what is the length (in cm) of QY?

(a) 6
(b) 18
(c) 12
(d) 8

Q72. If the five-digit number 672 xy is divisible by 3, 7 and 11, then what is the value of (6x + 5y)?

(a) 23
(b) 16
(c) 24
(d) 17

Q73. If $x^2 + 4y^2 + 3z^2 + 19/4 = 2\sqrt{3}(x + y + z)$ then the value of $(x - 4y + 3z)$ is:

(a) $\sqrt{3}/2$
(b) $2\sqrt{3}$
(c) $\sqrt{3}$
(d) $\sqrt{3}/3$

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Q74. The price of a commodity increase by 28%. However, the expenditure on it increases by 12%. What is the percentage increase or decrease in its consumption?

(a) 16% Increase
(b) 12.5 % Decrease
(c) 12.5% Increase
(d) 16% Decrease

Q75. If $\cos\theta = \sqrt{3}/2$, then the value of $(2 - \sin^2\theta)/(1 - \cot^2\theta) + (\sec^2\theta + \text{cosec}\,\theta)$ is

(a) -59/24
(b) 25/12
(c) 59/24
(d) -25/12

GENERAL AWARENESS

Q76. Where is Mount Diavolo, an important mountain peak in the Andaman and Nicobar Islands, located?

(a) Middle Andaman
(b) North Andaman
(c) South Andaman
(d) Great Nicobar

Q77. In which of the following districts was Telangana's first rescue and rehabilitation centre for monkeys, launched in December 2020?

(a) Nirmal
(b) Narayanpet
(c) Mulugu
(d) Adilabad

Q78. Which of the following hormone is secreted by brain that helps to regulate sleep-wake cycles?

(a) Oxytoxin
(b) Insulin
(c) Aldosterone
(d) Melatonin

Q79. Raja Parba is a unique festival celebrating the onset of monsoon and the earth's womanhood. It is celebrated in which of the following states?

(a) Meghalaya
(b) Odisha
(c) Bihar
(d) Uttar Pradesh

Q80. Kisan Fasal Rahat Yojana, which will replace (PMFBY) Pradhan Mantri Fasal Bima Yojna, has been launched by which of the following states government in December 2020?

(a) Chhattisgarh
(b) Punjab
(c) Jharkhand
(d) Andhra Pradesh

Q81. Who was appointed as the first Surveyor General of India in 1815?

(a) John Hodgson
(b) Thomas Hickey
(c) Colin Mackenzie
(d) Henry Walpole

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Q82. Which of the following is a salt-water lake?

(a) Kolleru
(b) Nainital
(c) Loktak
(d) Pangong Tso

Q83. Dandeli Wildlife Sanctuary is located in which of the following states?

(a) Kerala
(b) Karnataka
(c) Jharkhand
(d) Sikkim

Q84. Shanti Swarup Bhatnagar Prize is associated with which of the following disciplines?

(a) Music
(b) Sports
(c) Science and Technology
(d) Literature

Q85. Who among the following persons was elected, unopposed, as the President of Hockey India in November 2020?

(a) David John
(b) Harendra Singh
(c) Gyanendro Ningombam
(d) Mohd Mushtaque Ahmad

Q86. In which year did the Central Government of India appoint the States Reorganisation Commission?

(a) 1953
(b) 1958
(c) 1950
(d) 1951

Q87. _____ is an advanced discipline that teaches students how to analyse and find patterns in large amounts of data.

(a) Computer science
(b) Data science
(c) Computer programming
(d) Software development

Q88. Ustad Iqbal Ahmed Khan, a recipient of the Sangeet Natak Academy Award, belongs to the _____ Gharana.

(a) Gwalior
(b) Dilli
(c) Jaipur-Atrauli
(d) Agra

Q89. Who among the following sportsmen is the brand ambassador of SBOTOP, which is a global online betting platform?

(a) Rohit Sharma
(b) Sushil Kumar
(c) Bajrang Punia
(d) Dwayne Bravo

Q90. In which of the following years did the Prime Minister of India, Narendra Modi, launch Atal Pension Yojana?

(a) 2020
(b) 2014
(c) 2018
(d) 2015

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Q91. FIFA World Cup 2022 venue, Ahmad Bin Ali Stadium, which was built by Indian construction giant Larsen & Turbo is located in which of the following countries?

(a) Bahrain
(b) Qatar
(c) Oman
(d) Saudi Arabia

Q92. Which of the following is a vector quantity?

(a) Electric current
(b) Electric flux
(c) Electric field
(d) Electric charge

Q93. Which country ranked first in the 'Human Development Report 2020' released by the United Nations Development Programme?

(a) Hong Kong
(b) Norway
(c) Germany
(d) Switzerland

Q94. Which of the following parts of the body/glands maintains the body temperature?

(a) Thyroid
(b) Pituitary
(c) Adrenal
(d) Hypothalamus

Q95. In which of the following North Eastern states is the first ever specialised 'Ginger' Processing Plant being revived in December 2020?

(a) Mizoram
(b) Sikkim
(c) Assam
(d) Meghalaya

Q96. Who among the following persons was awarded the Padma Shri for social work in 2019?

(a) Devarapalli Prakash Rao
(b) Ramaswami Venkataswami
(c) Narsingh Dev Jamwal
(d) Anup Ranjan Pandey

Q97. _____'s foster mother Mahapajapati Gotami was the first woman to be ordained as a bhikkhuni.

(a) Bindusara
(b) Ashoka
(c) Buddha
(d) Arjuna

Q98. Who among the following was the first Indian Governor of the Reserve Bank of India?

(a) Morarji Desai
(b) Liaquat Ali Khan
(c) CD Deshmukh
(d) KC Neogy

Q99. Which of the following is one of the file formats used for web graphics?

(a) .gif
(b) .docx
(c) .txt

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(d) .exe

Q100. According to the Constitution of India a Judge of the Supreme Court cannot be removed from office except by an order of the _____.

(a) Vice President
(b) Attorney General
(c) Prime Minister
(d) President

ANSWER KEY

1	a	2	b	3	b	4	d	5	a	6	d	7	d	8	a	9	d	10	a
11	c	12	b	13	a	14	b	15	c	16	c	17	b	18	c	19	a	20	a
21	c	22	b	23	b	24	b	25	d	26	a	27	b	28	b	29	d	30	d
31	b	32	a	33	b	34	b	35	b	36	c	37	d	38	a	39	c	40	a
41	a	42	a	43	d	44	b	45	c	46	b	47	b	48	d	49	a	50	b
51	b	52	b	53	b	54	a	55	d	56	a	57	a	58	b	59	b	60	c
61	d	62	d	63	d	64	c	65	a	66	c	67	b	68	a	69	c	70	b
71	c	72	d	73	c	74	b	75	c	76	a	77	a	78	d	79	b	80	c
81	c	82	d	83	b	84	c	85	c	86	a	87	b	88	b	89	d	90	d
91	b	92	c	93	b	94	d	95	d	96	a	97	c	98	c	99	a	100	d

SOLUTIONS

Q1. Answer: (a) Possesions

The solution is in Hindi. Read it online.

Q2. Answer: (b) a nasal vaccine

The solution is in Hindi. Read it online.

Q3. Answer: (b) Acoustics

The solution is in Hindi. Read it online.

Q4. Answer: (d) Contemptible

The solution is in Hindi. Read it online.

Q5. Answer: (a) had grown quite tall

The solution is in Hindi. Read it online.

Q6. Answer: (d) CDBA

The correct answer is 'CDBA'.

Key Points

• The given question is an example of a Para Jumble.

• We know that the first statement of a para jumbled question is usually an independent general statement, a noun, a universal fact, starting of an incident, or it starts with 'most' or 'once'.

• Sentence C will be the first sentence because it is talking about Michael Jackson and this is an introductory sentence.

• Sentence D will be the next sentence because it further explains the kind of work he used to do the exertion he used to put in his songs.

• Sentence B will be the next sentence because it is connected with the previous sentence.

• Lastly, Sentence A will be used.

• Thus, the correct sequence is:

• C: Michael Jackson, called the ‘King of Pop Music’, stayed at the top of his career for many years.

• D: He was respected for his work culture; he would spend long nights at the studio to fix a note correctly in a song.

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• B: Unfortunately, he began spending lavishly on anything he desired, not what he actually needed.

• A: As a result, he had a debt of 500 million US dollars at the time of his death.

Correct Sequence: Michael Jackson, called the 'King of Pop Music', stayed at the top of his career for many years. He was respected for his work culture; he would spend long nights at the studio to fix a note correctly in a song. Unfortunately, he began spending lavishly on anything he desired, not what he actually needed. As a result, he had a debt of 500 million US dollars at the time of his death.

Q7. Answer: (d) Having a close friendship

The solution is in Hindi. Read it online.

Q8. Answer: (a) Unusual

The solution is in Hindi. Read it online.

Q9. Answer: (d) Akhila was given a bouquet of lilies on her birthday by Sai Kumari.

The solution is in Hindi. Read it online.

Q10. Answer: (a) drowned

The solution is in Hindi. Read it online.

Q11. Answer: (c) The students asked the teacher, "Where can we find the information for our project?"

The solution is in Hindi. Read it online.

Q12. Answer: (b) Prohibit

The solution is in Hindi. Read it online.

Q13. Answer: (a) by the incident

The solution is in Hindi. Read it online.

Q14. Answer: (b) Hautily

The solution is in Hindi. Read it online.

Q15. Answer: (c) DBCA

The correct answer is 'DBCA'.

Key Points

• The given question is an example of a Para Jumble.

• We know that the first statement of a para jumbled question is usually an independent general statement, a noun, a universal fact, starting of an incident, or it starts with 'most' or 'once'.

• Sentence D will be the first sentence because it is an introductory sentence explaining the sports.

• Sentence B will be the next sentence because it further explains the definition of sports.

• Sentence C will be the next sentence because it is connected with the previous sentence.

• Lastly, Sentence A will be used.

• Thus, the correct sequence is:

• D: Sports are part of every culture, past and present, but each culture has its own definition of sports.

• B: The most useful definitions are those that clarify the relationship of sports to play, games and contests.

• C: "Play," wrote the German theorist Carl Diem, "is purposeless activity, for its own sake, the opposite of work."

• A: Humans work because they have to; they play because they want to.

Correct Sequence: Sports are part of every culture, past and present, but each culture has its own definition of sports. The most useful definitions are those that clarify the relationship of sports to play, games and contests. "Play," wrote the German theorist Carl Diem, "is purposeless activity, for its own sake, the opposite of work." Humans work because they have to; they play because they want to.

Q16. Answer: (c) from 3:30 p.m. and 5:30 p.m.

The correct answer is 'from 3:30 p.m. and 5:30 p.m.'

Key Points

• The given sentence is grammatically incorrect.

• Here, 'from 3:30 p.m. to 5:30 p.m.' should be used instead of 'from 3:30 p.m. and 5:30 p.m.'.

• We know that the preposition 'from' is followed by 'to'.

• We use 'from … to' to talk about ranges of different things

• Example: Sir Edward Youde was the Governor of Hong Kong from 1982 to 1985.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 3.

Correct Sentence: The sports day events will be conducted from 3:30 p.m. to 5:30 p.m. on Saturday

Q17. Answer: (b) Venture

The solution is in Hindi. Read it online.

Q18. Answer: (c) To be embarrassed because of one's action

The solution is in Hindi. Read it online.

Q19. Answer: (a) Ordered

The solution is in Hindi. Read it online.

Q20. Answer: (a) like

The solution is in Hindi. Read it online.

Q21. Answer: (c) bounded

The correct answer is 'bounded'.

Key Points

• The given passage is about the Indian state of 'Meghalaya'.

• If a country or area of land is bounded by something such as a wall, river, etc, it has the wall, etc at its edge.

• Example: The US is bounded in the north by Canada and in the south by Mexico.

• Therefore, as per the points mentioned above, we find that the correct answer is Option 3.

Correct Sentence: It is bounded by the Indian state of Assam...

Q22. Answer: (b) by

The solution is in Hindi. Read it online.

Q23. Answer: (b) the

The correct answer is 'the'.

Key Points

• The given passage is about the Indian state of 'Meghalaya'.

• We know that the article 'The' before a noun shows that what is referred to is already known to the speaker, listener, writer, and/or reader (it is the definite article).

• Example: We had to paint the apartment before we sold it. (The speaker and the listener know what apartment is being referred to.)

• Therefore, as per the points mentioned above, we find that the correct answer is Option 2.

Correct Sentence: The state capital is the hill town of Shillong...

Q24. Answer: (b) detached

The solution is in Hindi. Read it online.

Q25. Answer: (d) elevation

The solution is in Hindi. Read it online.

Q26. Answer: (a) 9 and 8; + and ÷

According to BODMAS rule

Given equation $65 + 13 - 119 \div 32 \times 8 = 175$

Option 1 → 9 and 8; + and ÷

$65 \div 13 - 118 + 32 \times 9 = 175$

By BODMAS rule

$5 - 118 + 32 \times 9 = 175$

$5 - 118 + 288 = 175$

$293 - 118 = 175$

$293 - 118 = 175$

$175 = 175$ (LHS = RHS)

Option 2 → 2 and 9; + and ×

65 × 13 − 112 ÷ 39 + 8 = 175
65 × 13 – 2.87 + 8 = 175
845 – 2.87 + 8 = 175
853 – 2.87 = 175
850.13 = 175 (LHS ≠ RHS)
Option 3 → 8 and 3; × and ÷
65 + 18 − 119 ÷ 82 × 3 = 175
65 + 18 – 1.45 × 3 = 175
78.65 = 175 (LHS ≠ RHS)
Option 4 → 5 and 8; − and ×
68 + 13 − 119 ÷ 32 × 5 = 178
68 + 13 – 3.71 × 5 = 178
81– 18.55 = 178
62.45 = 178 (LHS ≠ RHS)
Hence, the answer is “9 and 8; + and ÷”.

Q27. Answer: (b) GHLORUY

The logic here is,
Word are arranging according to the in alphabets table.
Now follow the steps:
OUTSTAY : AOSTTUY
=> OUTSTAY → alphabets arrangement → AOSTTUY
Similarly,
ROUGHLY : ?
=> ROUGHLY → alphabets arrangement → GHLORUY
Hence, "GHLORUY" is correct answer.

Q28. Answer: (b) RMRGRZO

Table show alphabet serial number –
The pattern for the code is as follows,
EXTREME is written as VCGIVNV
Similarly,
INITIAL = ?
Hence, ‘INITIAL’ is coded as ‘RMRGRZO’.

Q29. Answer: (d) #

The opposite surface of the open dice can be found by the below method:-
• Alternate surfaces are opposite to each other.
• No two opposite surfaces are touched by side or by corners
So, by using the above rule we can find the opposite surface of open dice.
Below are the opposite surfaces:-

Symbols	Opposite
@	%
#	$
&	•

Option (1) * → & is opposite to *.
Option (2) & → * is opposite to &.
Option (3) @ → % is opposite to @.
Option (4) # → $ is opposite to #.
So, when the table will be constructed, the letters ‘$ and #’ will be opposite to each other.
Hence, ‘#’ is the correct answer.

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Q30. Answer: (d) Human

The logic followed here is:

Flock : Sheep → A group of sheep is called flock.

Similarly,

Crowd : Human → A group of human is called Crowd.

Hence, the correct answer is "Human".

Additional Information

Fish → A group of fish called a school.

Swans → A group of swans is called bevy.

Q31. Answer: (b) 4, 3, 1, 5, 2

According to the sequence in the dictionary:

The correct order of the given words is:

4. Ingenuous

3. Inhabitant

1. Inhaler

5. Inheritance

2. Inimitable

Hence, the correct answer is "4, 3, 1, 5, 2".

Q32. Answer: (a) 18

The number of triangles in the given figure is:

So, there are a total of 18 triangles in the figure.

Hence, ‘18’ is the correct answer.

Q33. Answer: (b) 72 : 81 : 90

The Logic here is as follows:

Step 1 → 1^(st) Number

Step 2 → 1^(st) Number + (digit sum of 1^(st) number) = 2^(nd) number

Step 3 → 2^(nd) number + (digit sum of 2^(nd) number) = 3^(rd) number

In 47 : 58 : 71

Step 1 → 47

Step 2 → 47 + (4 + 7) = 47 + 11 = 58 = 2^(nd) number

Step 3 → 58 + (5 + 8) = 58 + 13 = 71 = 3^(rd) number

Similarly,

72 : 81 : 90

Step 1 → 72

Step 2 → 72 + (7 + 2) = 72 + 9 = 81 = 2^(nd) number

Step 3 → 81 + (8 + 1) = 81 + 9 = 90 = 3^(rd) number

Hence, the correct answer is "(72 : 81 : 90)".

Q34. Answer: (b) Bangladesh

The logic followed here is:

Option (1) Sri Lanka → Sri Lanka is an island country.

Option (2) Bangladesh → Bangladesh is not an island country.

Option (3) Singapore → Singapore is an island country.

Option (4) Indonesia → Indonesia is an island country.

Note:- An island country is a nation that is made up of one or more islands or land that is surrounded completely by water.

Hence, “Bangladesh” is an odd one.

Q35. Answer: (b) i j i i j i

Given:- k j i _ k _ _ i k j i _ k _ _ i

We put all the option in blank area and check who create particular pattern:

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1) k i j k i j → k j i k - k i j i - k j i k - k i i i
2) i j i i j i → k j i i - k j i i - k j i i - k j i i
A particular pattern is repeating itself when the sequence is divided into equal parts.
3) j k j k j k → k j i j - k k j i - k j i k - k j k i
4) i k j i k j → k j i i - k k j i - k j i i - k k i i
• Option (2) gives a pattern of k j i i - k j i i - k j i i - k j i i.
Hence, 'i j i i j i' is the correct answer.

Q36. Answer: (c) 7

Given:

13	**50**	**8**
12	39	5
15	51	?

Here the pattern followed in each row is:
{2^(nd) number - (1^(st) number × 2)} ÷ 3 = 3^(rd) number
Row 1: 13, 50, 8
{2^(nd) number - (1^(st) number × 2)} ÷ 3 = 3^(rd) number
= {50 - (13 × 2)} ÷ 3
= (50 - 26) ÷ 3
= 24 ÷ 3
= 8 = 3^(rd) number
Row 2: 12, 39, 5
{2^(nd) number - (1^(st) number × 2)} ÷ 3 = 3^(rd) number
= {39 - (12 × 2)} ÷ 3
= (39 - 24) ÷ 3
= 15 ÷ 3
= 5 = 3^(rd) number
Similarly,
Row 3: 15, 51, ?
{2^(nd) number - (1^(st) number × 2)} ÷ 3 = 3^(rd) number
= {51 - (15 × 2)} ÷ 3
= (51 - 30) ÷ 3
= 21 ÷ 3
= 7 = 3^(rd) number
Hence, "7" is correct answer.

Q37. Answer: (d) Shark : School

The logic followed here is:
Mosquito : Swarm → A group of mosquito is called swarm.
Similarly,
Shark : School → A group of shark is called school.
Hence, 'Shark : School' is the correct answer.
Additional Information
• A group of snakes is called den or pit.
• A group of cats is called a clowder.
• A group of Monkey is called a barrel or a troop.
• A group of Lion is called pride.

Q38. Answer: (a) Father

Preparing the family tree using the following symbols,
Given:

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Ruchi's husband's grandfather is Abhinav, whose grandson's father is Viyan. Abhinav and his wife have only one son

We can draw the following Family Tree from the information given above:

Hence, Viyan is the "father" of Ruchi's husband.

Q39. Answer: (c) [figure]

The figure that will replace the question mark (?) in the following figure series is shown below:

1) In first, third and fifth figure the small figure present in rows change it place with adjacent figure and first and third figure is same.

2) In second, fourth and sixth figure the small figure present in rows change it place with adjacent figure and second and sixth figure is same.

Hence, ‘option 3’ is the correct answer.

Q40. Answer: (a) 2143152558

The table is alphabets place value:

The pattern followed here is:

Step 1: Consonants coded as its opposite alphabet place value.

Step 2: Vowel’s coded as position number of vowel’s position like,

A = 1; E = 2; I = 3; O = 4; U = 5

VICTORY is coded as 29472435

And,

HASTY is coded as 278119

Similarly,

Hence, 'SUBLIME' is coded as "2143152558".

Q41. Answer: (a) 50

Let,

Number of girls = G

Number of boys = B

At village P

Number of girls in the bus is one-fourth of the number of boys so,

=> G = 1/4B

=> 4G = B

At village Q

20 boys leave the bus at their college stop and ten girls enter the bus.

Number of girls = G + 10

Number of boys = B - 20

Now the number of boys and girls is equal

=> G + 10 = B – 20

Because 4G = B

So,

=> G + 10 = 4G – 20

=> 4G - 4 = 20 + 10

=> 3G = 30

=> G = 10

Because 4G = B

So, B = 4 × 10

B = 40

Total number of students enter the bus in the beginning = B + G = 10 + 40 = 50

Hence, Total number of students enter the bus in the beginning is “50”.

Q42. Answer: (a) TXBV

Table show alphabet serial number –

The pattern followed is,

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All follow the same pattern, except ‘TXBV’.

Hence, “TXBV” is the odd one.

Q43. Answer: (d) [figure]

The image obtained when the paper is unfolded is,

Hence, option 4 is the correct answer.

Q44. Answer: (b) 289

The pattern followed here is,

Let (1^(st) number : 2^(nd) number)

1^(st) number × (1^(st) number ÷ 2) + 1 = 2^(nd) number

Now follow the steps:

18 : 163

18 × (18 ÷ 2) + 1

= 18 × 9 + 1 = 162 + 1 = 163 = 2^(nd) number

Similarly,

24 : ?

24 × (24 ÷ 2) + 1

= 24 × 12 + 1 = 288 + 1 = 289 = 2^(nd) number

Hence, "289" is correct answer.

Q45. Answer: (c) [figure]

The correct mirror image of the given figure when the mirror is held at the right side is:

Hence, "option (3)" is the correct answer.

Additional Information

In Mirror image left side and right side changed vice-versa where top and bottom remain same.

Reflection of an object into the water is its water image. It appears by inverting an object vertically i.e. upside down.

The water image of the figure looks like the mirror image of the figure in case the mirror is horizontally at the bottom of the figure.

Water image is just a reflection where top and bottom part of the images changed where left and right side of the image remain same.

Q46. Answer: (b) [figure]

The embedded part of this image is:

Hence, option (2) is the correct answer.

Q47. Answer: (b) 26

The pattern followed here is:

Hence, '26' is the correct answer.

Q48. Answer: (d) Only conclusion II follows

Statements:

Some dogs are bulls.

All bulls are donkeys.

The least possible diagram for the given statements is as follows

Conclusions:

I. All dogs are donkeys → False (It is possible but not definite)

II. Some donkeys are dogs → True (because some dogs are bulls and all bulls are donkeys so definitely some donkeys are also dogs)

Hence, “Only conclusions II follows”.

Additional Information

Q49. Answer: (a) 308

The logic followed here is:

All the given options except option (1), are the prime numbers whereas option 1 is not a prime number.

Option (1) 308 → It is not a prime number.

Option (2) 137 → It is a prime number.
Option (3) 229 → It is a prime number.
Option (4) 463 → It is a prime number.
Hence, “308” is the correct answer.

Q50. Answer: (b) [figure]

The Venn diagrams best represent the relationship between - Statistician, Men, Pathologists figures are shown below:
Some men are statisticians and some men are pathologists.
Hence, ‘option 2’ is the correct answer.

Q51. Answer: (b) 14°

Given:
tan x = cot (48° + 2x)
0° < x < 90°
Concept used:
tan θ = cot (90° - θ)
Calculation:
tan x = cot (48° + 2x)
=> cot (90° - x) = cot (48° + 2x)
=> (90° - x) = (48° + 2x)
=> 3x = 42°
=> x = 14°
Therefore The value of x is 14°.

Q52. Answer: (b) (6 + √ 3)/3

Given:
(tan 50° + sec 50°)/(cot 40° + cosec 40°) + cos2 65° + sin 65° cos 25° + tan 30°
Concept used:
Cot (90° - θ) = Tan θ
Cosec (90° - θ) = Sec θ
Sin (90° - θ) = Cos θ
Sin² θ + Cos² θ = 1
Calculation:
(tan 50° + sec 50°)/(cot 40° + cosec 40°) + cos2 65° + sin 65° cos 25° + tan 30°
=> {Cot (90 - 50)° + Cosec (90 - 50)°}/(Cot 40° + Cosec 40°) + cos2 65° + sin 65° sin (90 - 25)° + tan 30°
=> (Cot 40° + Cosec 40°)/(Cot 40° + Cosec 40°) + (cos2 65° + sin² 65°) + (1/√3)
=> 1 + 1 + (1/√3)
=> 2 + √3/3
=> (6 + √ 3)/3
Therefore The value of (tan 50° + sec 50°)/(cot 40° + cosec 40°) cos2 65° + sin 65° cos 25° + tan 30° is (6 + √ 3)/3.

Q53. Answer: (b) 10

Shortcut Trick
The altitude of 12 cm divides the isosceles triangle into two congruent right-angled triangles.
Recall the common Pythagorean triplet with a perpendicular of 12: (5, 12, 13).
Let equal side (hypotenuse) = 13 cm and half-base = 5 cm.
Verify perimeter: 13 + 13 + (2 × 5) = 36 cm, which exactly matches the given condition.
Therefore, the total length of base BC is 2 × 5 = 10 cm.
Therefore The correct answer is 10 cm.
Alternate Method
A
B
C

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D

x

x

12 cm

y

y

BC = 2y

Given:

=> ΔABC is isosceles with equal sides AB = AC = x.

=> AD perpendicular to BC, and for an isosceles triangle, altitude AD bisects the base.

=> Let BD = DC = y, making the full base BC = 2y.

=> Perimeter of ΔABC = AB + AC + BC = 2x + 2y = 36 cm.

=> Divide the perimeter equation by 2: x + y = 18.

Formula Used:

=> Pythagoras Theorem: Hypotenuse² = Perpendicular² + Base²

Calculations:

=> In right-angled ΔABD, apply the Pythagoras theorem:

=> $AB^2 = AD^2 + BD^2$

=> $x^2 = 12^2 + y^2$

=> $x^2 - y^2 = 144$

=> Expand using algebraic identity: $(x + y)(x - y) = 144$

=> Substitute (x + y) = 18 into the equation:

=> $18 \times (x - y) = 144$

=> $x - y = 144 \div 18 = 8$

=> To find y, subtract the new equation from the initial sum equation:

=> $(x + y) - (x - y) = 18 - 8$

=> 2y = 10 cm

=> Since the base BC is represented by 2y, length of BC = 10 cm.

Therefore The correct answer is 10 cm.

Additional Information

Properties of Isosceles Triangle

In an isosceles triangle, the altitude drawn to the unequal side always bisects both the base and the vertex angle. This property effectively divides the main triangle into two congruent right-angled triangles.

Area of Isosceles Triangle

The formula to find the area is Area = $(b \div 4) \times \sqrt{(4a^2 - b^2)}$, where 'a' is the length of equal sides and 'b' is the length of the base. Alternatively, if altitude is given, Area = ½ × base × height.

Pythagorean Triplets

Memorizing common integer triplets (a, b, c) where $a^2 + b^2 = c^2$ is a crucial time-saving tool in exams. Examples include (3, 4, 5), (5, 12, 13), (8, 15, 17), and (7, 24, 25). These scale up proportionally as well.

Q54. Answer: (a) Rs. 20,000

Calculation:

Money was spent through Card C as compared to Card D in percentage = (100° - 80°)/360° × 100% = (50/9)%

Money was spent through Card C as compared to Card D = (50/9)% × 3,60,000 = 20,000

Therefore Rs. 20,000 was more spent through Card C as compared to Card D.

Q55. Answer: (d) 85.2%

Calculation:

The total revenue of the company in 2014, 2016 and 2018 = (320 + 380 + 280) = 980 crore

The total expenditure in 2015 to 2017 and 2019 = (250 + 330 + 360 + 210) = 1150 crore

% = (980/1150) × 100 = 85.217 ≈ 85.2%

Therefore Required answer is 85.2%

Q56. Answer: (a) 440.00

Shortcut Trick

Total percentage gap = Loss% + Gain% = 12% + 10.5% = 22.5%

According to the question, 22.5% of Cost Price (CP) = Rs. 112.50

=> 1% of CP = 112.50 ÷ 22.5 = Rs. 5

Original Selling Price = CP − 12% Loss = 88% of CP

=> 88% = 88 × 5 = Rs. 440

Therefore The correct answer is Rs. 440.00.

Alternate Method

Given:

Initial loss = 12%

New gain = 10.5%

Difference in Selling Price (SP) = Rs. 112.50

Formula Used:

SP = CP × (100 ± Profit/Loss%) ÷ 100

Calculations:

=> Let the Cost Price of the article be Rs. x.

=> Original Selling Price (SP1) = x × (100 − 12) ÷ 100 = 0.88x

=> New Selling Price (SP2) = x × (100 + 10.5) ÷ 100 = 1.105x

=> Difference = SP2 − SP1

=> 1.105x − 0.88x = 112.50

=> 0.225x = 112.50

=> x = 112.50 ÷ 0.225 = Rs. 500

=> Original Selling Price = 0.88 × 500

=> Original Selling Price = Rs. 440

Therefore The correct answer is Rs. 440.00.

Additional Information

Profit and Loss Percentage

Profit% = (Profit ÷ CP) × 100 and Loss% = (Loss ÷ CP) × 100. Both are always calculated on the Cost Price unless stated otherwise.

Successive Percentage Changes

If an object is sold through multiple hands at profits a% and b%, the net profit is given by [a + b + (ab ÷ 100)]%.

Marked Price and Discount

Selling Price = Marked Price (MP) − Discount. Discount is usually calculated as a percentage of the MP.

Q57. Answer: (a) 25%

Given:

Two successive discounts each of x % on the marked price of an article are equal to a single discount of Rs. 350.

Marked price of the article is Rs. 800.

Concept used:

If two successive discount of A% is given, then the resultant or effective single discount is (A + A - A²/100)%

Middle term factor

Calculation:

According to the question,

800 × (2x - x²/100)% = 350

=> (2x - x2/100) = 175/4

=> x = 25

Therefore The value of x is 25.

Q58. Answer: (b) 10,648

Shortcut Trick

Rate (R) = (SI × 100) ÷ (P × T) = (3600 × 100) ÷ (8000 × 3) = 15% p.a.

For 8-monthly compounding, cycle rate = 15% × (8 ÷ 12) = 10% per 8 months.

Total time of 2 years = 24 months, which gives 24 ÷ 8 = 3 compounding cycles.

Amount after 3 cycles at 10% growth = $8000 \times (11/10)^3$

Amount = 8000 × 1.331 = 10648.

Therefore The correct answer is Rs. 10,648.

Alternate Method

Given:

Principal (P) = Rs. 8000

Simple Interest (SI) = Rs. 3600

Time for SI (T) = 3 years

Formula Used:

Simple Interest = (P × R × T) ÷ 100

Compound Amount (A) = $P(1 + R/100)^n$

Calculations:

=> SI = (P × R × T) ÷ 100

=> 3600 = (8000 × R × 3) ÷ 100

=> 3600 = 240 × R

=> R = 15% per annum

=> The rate for an 8-monthly period = 15% × (8 ÷ 12) = 10%

=> Time duration = 2 years = 24 months

=> Number of 8-monthly cycles (n) = 24 ÷ 8 = 3

=> Total Amount = $P(1 + R/100)^n$

=> Total Amount = $8000 \times (1 + 10/100)^3$

=> Total Amount = 8000 × (11/10) × (11/10) × (11/10)

=> Total Amount = 8000 × (1331 ÷ 1000)

=> Total Amount = 8 × 1331 = 10648

Therefore The correct answer is Rs. 10,648.

Additional Information

Effective Compounding Rate

When interest is compounded k-monthly, the applicable rate per cycle becomes R% × (k ÷ 12) and total cycles become Total Months ÷ k.

Compound vs Simple Interest Difference

For 2 years, CI − SI = $P(R/100)^2$. For 3 years, CI − SI = $P(R/100)^2 \times (3 + R/100)$.

Compounding Frequencies

If compounded Half-yearly: Rate is halved, time cycles are doubled. If Quarterly: Rate becomes one-fourth, time cycles become four times.

Q59. Answer: (b) -175

Given:

(x - 2y) × (5x + y)3

Concept used:

$(a + b)^3 = a^3 + 3a^2b + 3ab^2 + b^3$

Calculation:

(x - 2y) × (5x + y)3

=> $(x - 2y) \times (125x^3 + 75x^2y + 15xy^2 + y^3)$

=> 125x^4 + 75x3y + 15x²y2 + xy3 - 250x³y - 150x²y² - 30xy³ - 2y^4

=> 125x4 + (75x3y - 250x3y) + 15x2y2 + xy3- 150x2y2 - 30xy3 - 2y4

=> 125x4 + (-175x3y) + 15x2y2 + xy3- 150x2y2 - 30xy3 - 2y4

Therefore The coefficient of x^3y is (-175).

Q60. Answer: (c) 51/2

Given:

5/4× 2 2/3÷ 5/9 of 11/5+2/25× 4 1/6÷ 2/7 of 2 1/3

Concept used:

Calculation:

5/4× 2 2/3÷ 5/9 of 11/5+2/25× 4 1/6÷ 2/7 of 2 1/3

=> 5/4 × 8/3 ÷ 5/9 of 6/5 + 2/25 × 25/6 ÷ 2/7 of 7/3

=> 5/4 × 8/3 ÷ 2/3 + 2/25 × 25/6 ÷ 2/3

=> 5/4 × 4 + 2/25 × 25/4

=> 5 + 1/2

=> 51/2

Therefore The required value of 5/4× 2 2/3÷ 5/9 of 11/5+2/25× 4 1/6÷ 2/7 of 2 1/3 is 51/2.

Q61. Answer: (d) 40

Given:

The bag contains coins of denominations of Rs. 1, Rs. 2, and Rs. 5 in the ratio of 4 : 5 : 8.

Concept used:

Ratio Proportion

Calculation:

Let the common ratio be P.

So, the number of coins of Rs. 1, Rs. 2, and Rs. 5 = 4P, 5P & 8P respectively.

According to the question,

4P + (5P × 2) + (8P × 5) = 432

=> P = 8

=> 5P = 40

Therefore There are 40 coins of Rs. 2.

Q62. Answer: (d) 9 : 7

The total number of workers whose daily wages are Rs. 450 or above but less than Rs. 500 = 45

The total number of workers whose daily wages are Rs. 650 or above = 35

So, the ratio = 45 : 35 = 9 : 7

Therefore 9 : 7 is the ratio of the total number of workers whose daily wages are Rs. 450 or above but less than Rs. 500 to the total number of workers whose daily wages are Rs. 650 or above.

Q63. Answer: (d) 10 days

Given:

A can complete a work in 20 days.

B can complete the same work in 25 days.

Both worked together for 10 days and then C alone completed the remaining work in 10 days.

Concept used:

Entire work = Work done each day × Time taken to finish the entire work

Calculation:

LCM (20, 25) = 100

Let the entire work be given by the LCM of the time taken by A & B.

So, the entire work = 100 units

Now,

A does each day = 100 ÷ 20 = 5 units

B does each day = 100 ÷ 25 = 4 units

So, in 10 days A and B together do = (5 + 4) × 10 = 90 units

Remaining work = (100 - 90) = 10 units

So, C does each day = (10 ÷ 10) = 1 unit

Then, A, B and C together do each day = (5 + 4 + 1) = 10 units

So, the time is taken by them to finish the work together = (100 ÷ 10) = 10 days

Therefore In 10 days A, B and C together will complete the same work.

Shortcut Trick A × 20 = B × 25, A/B = 5/4 ....(efficiency ratio)

(A + B) × 10 + C × 10 = A × 20 ....(1)

Put the value of A and B

9 × 10 + C × 10 = 5 × 20, C = (100 - 90)/10, C = 1

Total work = (A + B + C) × d = 5 × 20

(5 + 4 + 1) × d = 100, d = 10

Q64. Answer: (c) 17.5

Given:

Chord PQ of a circle C1 of radius 9.25 cm (CP = 9.25 cm) touches another circle C2 that is concentric to C1, and the radius of C2 is 3 cm (CD = 3cm).

Concept used:

If a radius of a circle is perpendicular to a chord in the circle, then the radius bisects the chord.

Pythagorean theorem

Calculation:

ΔCDP is a right-angled triangle.

Now, we know,

$CP^2 = CD^2 + PD^2$

=> PD = 8.75

So, PQ = 2 × PD = 2 × 8.75 = 17.5 cm

Therefore The length of PQ is 17.5 cm.

Q65. Answer: (a) 20

Given:

The average height of a certain number of students in a group is 155.6 cm.

12 students having an average height of 150.5 cm join the group

7 students having an average height of 159 cm leave the group

The average height of the students in the group will decrease by 34 mm i.e. 3.4 cm

Concept used:

Let xn be the observations and wn be the weights of the observations; the formula of the weighted average is given below.

W = (w1x1+ w2x2 + w3x3+ ... + wnxn) ÷ (w1 + w2 + w3 + ... + wn)

Calculation:

Let the intial number of students be P.

So, total height of P students = (P × 155.6) cm

Now, total height increased by = (12 × 150.5) = 1806 cm

Then, total height decreased by = (7 × 159) = 1113 cm

Now, the total change in height = (1806 - 1113) = 693 cm

The final number of stundets = (P + 12 - 7) = (P + 5)

According to the question,

155.6 × P + 693 = (155.6 - 3.4) × (P + 5)

=> P = 20

Therefore The number of students initially in the group was 20.

Q66. Answer: (c) 8

Given:

x + y + z = 13

x2 + y2 + z2 = 91

xz = y2

Concept used:

$(a + b + c)^2 = a^2 + b^2 + c^2 + 2 (ab + bc + ca)$

$(a - b)^2 = a^2 - 2ab + b^2$

Calculation:

x + y + z = 13

$=> (x + y + z)^2 = 13^2$

=> x2 + y2 + z2 + 2(xy + yz + xz) = 169

=> (xy + yz + xz) = 39
=> xy + yz + y^2 = 39
=> y(x + y + z) = 39
=> y = 3
=> y^2 = 9
=> xz = 9
=> 3xz = 27
So,
x2 + y2 + z2 = 91
=> x2 + xz - 3xz + z2 = 91 - 27
=> x2 - 2xz + z2 = 64
=> $(z - x)^2$ = 64
=> (z - x) = 8
Therefore The difference between z and x is 8.
Shortcut TrickGo by hit and trial method
Put the value of x = 9, y = 3, and z = 1 which satisfies the below equation.
x + y + z = 13
x2 + y2 + z2 = 91
xz = y2

Q67. Answer: (b) 5.075 cm

Given:
AB and DC are two chords. They are produced to meet at P.
PC = 2.8 cm, PB = 3.15 cm and AB = 3.85 cm,
Concept used:
Here, PA & PC are two secants and PT is a tangent at point T on the circle.
So, we know,
PA × PB = PC × PD = (PT)2
Calculation:
So, PA = AB + PB = 3.15 + 3.85 = 7 cm
Now,
PA × PB = PD × PC
=> 7 × 3.15 = PD × 2.8
=> PD = 7.875
=> PC + CD = 7.875
=> CD = 5.075
Therefore The length of CD is 5.075 cm.

Q68. Answer: (a) 1,23,000

Percentage change in sales,
For Strawberry = (20.5 - 18.9)% = 1.6%
For Others = (20.6 - 15.7)% = 4.9%
For Butterscotch = (16.6 - 10.8)% = 5.8%
Total percentage change in sales = 1.6% + 4.9% + 5.8% = 12.3%
So, the sales increased by = 12.3% × 10000 = Rs. 1,23,000
Therefore The combined strawberry, other and Butterscotch sales increase from 2019 to 2020 increased by Rs. 1,23,000.

Q69. Answer: (c) 675

Shortcut Trick
Relative speed (same direction) = 78 − 6 = 72 km/h = 20 m/s.
Length of train = Relative speed × Time = 20 × 15 = 300 m.
Total distance for tunnel = 78 × (5/18) × 45 = 975 m.
Length of tunnel = 975 − 300 = 675 m.

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Therefore The correct answer is 675 m.
Alternate Method
Given:
Speed of train = 78 km/h
Speed of person = 6 km/h
Time to cross tunnel = 45 s
Time to cross person = 15 s
Formula Used:
Distance = Speed × Time
Relative Speed (same direction) = S1 − S2
To convert km/h to m/s, multiply by 5/18.
=> Speed of train = 78 × (5/18) = 65/3 m/s
=> Speed of person = 6 × (5/18) = 5/3 m/s
=> Relative speed (same direction) = 65/3 − 5/3 = 60/3 = 20 m/s
=> Length of train = Relative speed × Time = 20 × 15 = 300 m
=> Total distance when crossing tunnel = Speed of train × Time = (65/3) × 45
=> Total distance = 65 × 15 = 975 m
=> Length of tunnel = Total distance − Length of train
=> Length of tunnel = 975 − 300 = 675 m
Therefore The correct answer is 675 m.
Additional Information
Relative Speed Concepts
When two objects move in the same direction, relative speed = V1 − V2. When moving in opposite directions, relative speed = V1 + V2.
Crossing Stationary Objects
To cross a stationary object of length L, a train of length T must cover a total distance of (T + L).
Unit Conversion
To convert speed from km/h to m/s, multiply by 5/18. To convert from m/s to km/h, multiply by 18/5.

Q70. Answer: (b) 108 m

Shortcut Trick
Volume remains constant: $4/3 \times \pi \times R^3 = \pi \times r^2 \times h$
=> $4/3 \times 9 \times 9 \times 9 = 0.3 \times 0.3 \times h$
=> $4 \times 3 \times 81 = 0.09 \times h$
=> $972 = 0.09 \times h$
=> h = 10800 cm = 108 m
Therefore The correct answer is 108 m.
Alternate Method
Given:
Radius of Sphere (R) = 9 cm
Radius of Wire (r) = 0.3 cm
Formula Used:
Volume of Sphere = $4/3 \times \pi \times R^3$
Volume of Cylinder (Wire) = $\pi \times r^2 \times h$
Calculations:
=> Volume of Sphere = Volume of Wire
=> $4/3 \times \pi \times (9)^3 = \pi \times (0.3)^2 \times h$
=> $4/3 \times 729 = 0.09 \times h$
=> $4 \times 243 = 0.09 \times h$
=> $972 = 0.09 \times h$
=> $h = 972 \div 0.09$
=> h = 10800 cm

=> h = 10800 ÷ 100 m

=> h = 108 m

Therefore The correct answer is 108 m.

Additional Information

Conservation of Volume

When a solid object is melted and recast into another shape, its total volume remains unchanged.

Cylinder Properties

A wire is always considered a cylinder where the length of the wire is the height (h) of the cylinder.

Unit Conversion

Always ensure units are consistent. 1 meter = 100 centimeters.

Q71. Answer: (c) 12

Given:

P is the midpoint of side XZ

Q is a point on side XY such that QZ bisects PY

XQ = 24 cm

Concept used:

Midpoint theorem: - The line segment in a triangle joining the midpoint of two sides of the triangle is said to be parallel to its third side and is also half of the length of the third side

ASA (Angle-Side- Angle) - If any two angles and the side included between the angles of one triangle are equivalent to the corresponding two angles and side included between the angles of the second triangle, then the two triangles are said to be congruent by ASA rule.

Calculation:

Let D be the midpoint of QZ

So, according to the Midpoint theorem,

PD/XQ = 1/2

So, PD = 12 cm

PD || XQ,

So, also PD || QY

angle QYO = angle OPD

angle QOY = angle DOP

angle QYO = angle OPD

angle YQO = angle ODP

PO = YO

So, ΔPOD ~= ΔQOY

So, QY = PD = 12 cm

Therefore The length (in cm) of QY is 12 cm

Q72. Answer: (d) 17

Given:

The five-digit number 672 xy is divisible by 3, 7, and 11.

Concept used:

For a given set of numbers, the LCM is the smallest number that is a multiple of every one of the numbers.

Calculation:

LCM (3,7,11) = 231

Since 672xy is a five-digit number, we're considering xy as 00, to get the closest quotient.

So, the quotient when 67200 is divided by 231 = (67200 ÷ 231) = 290

Now, the required number must be the next multiple of 231.

So, the required number = (290 + 1) × 231 = 67221

So, x = 2 and y = 1

Now,

(6x + 5y)

=> 6 × 2 + 5 × 1

=> 17

Therefore The required value of (6x + 5y) is 17.

Q73. Answer: (c) √3

Given:

x2 + 4y2 + 3z2 + 19/4 = 2√3(x + y + z)

Concept used:

$(a - b)^2 = a^2 - 2ab + b^2$

If $A^2 + B^2 + C^2 = 0$, then A = B = C = 0

Calculation:

x2 + 4y2 + 3z2 + 19/4 = 2√, 3(x + y + z)

=> $(x^2 - 2\sqrt{3}x + 3) + (4y^2 - 2\sqrt{3}y + (3/4)) + (3z^2 - 2\sqrt{3}z + 1) = 0$

=> $(x - \sqrt{3})^2 + (2y - (\sqrt{3}/2))^2 + (\sqrt{3}z - 1)^2 = 0$

So,

(x - √3)2 = 0

=> x = √3

(2y - (√3/2))2 = 0

=> y = √3/4

(√3z - 1)2 = 0

=> z = 1/√3

Now,

x - 4y + 3z

=> √3 - 4 × (√3/4) + 3 × (1/√3)

=> √3 - √3 + √3

=> √3

Therefore The required value of (x - 4y + 3z) is √3.

Q74. Answer: (b) 12.5 % Decrease

Given:

The price of a commodity increase by 28%.

The expenditure on it increases by 12%

Concept used:

Revised = Initial × (1 + percentage increase/100)

Calculation:

Let the previous price of the commodity be Rs. 100P per unit.

So, the revised price of the commodity = (100P × 1.28) = Rs. 128P

But, the expenditure has become = (100P × 1.12) = Rs. 112P

So, at Rs. 112P, the amount of commodity can be acquired = (112/128) unit = 7/8 unit

So, the lesser quantity than earlier at Rs. 112P = (1 - 7/8) = 1/8

Now, the percentage decrease in its consumption = 1/8 × 100% = 12.5%

Therefore The percentage decrease in its consumption is 12.5%

Alternate MethodIn these type of questions, we can use the following method:

EXPENDITURE (E) = CONSUMPTION (C) × PRICE (P)

(28% = 7/25, 12% = 3/25)

=> E = C × P

=> 28/25 = C × 32/25

=> C = 28/32 = 7/8

Therefore, the consumption will decrease by = 1/8 × 100 = 12.5%

Shortcut Trick Now, by the percentage graphics change method,

100 → 128 → 112

So, the percentage change = (128 - 112)/128 × 100% = 12.5%

Therefore The percentage decrease in its consumption is 12.5%

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Q75. Answer: (c) 59/24

Shortcut Trick

Since cos θ = √3/2, the standard value for θ is 30°.

Substitute θ = 30° directly into the expression:

Value = (2 − sin² 30°) / (1 − cot² 30°) + (sec² 30° + cosec 30°)

Value = (2 − 1/4) / (1 − 3) + (4/3 + 2) = (7/4)/(−2) + 10/3 = −7/8 + 10/3

Value = (−21 + 80) / 24 = 59/24.

Therefore The correct answer is 59/24.

Alternate Method

Given: cos θ = √3/2

Formula Used:

1. sin² θ + cos² θ = 1

2. cot θ = cos θ / sin θ

3. sec θ = 1 / cos θ

4. cosec θ = 1 / sin θ

Step-by-step Calculations:

=> If cos θ = √3/2, then sin θ = √(1 − (3/4)) = √(1/4) = 1/2.

=> cot θ = (√3/2) / (1/2) = √3.

=> sec θ = 1 / (√3/2) = 2/√3.

=> cosec θ = 1 / (1/2) = 2.

=> Expression Part 1 = (2 − sin² θ) / (1 − cot² θ) = (2 − (1/2)²) / (1 − (√3)²)

=> Part 1 = (2 − 1/4) / (1 − 3) = (7/4) / (−2) = −7/8.

=> Expression Part 2 = (sec² θ + cosec θ) = (2/√3)² + 2 = 4/3 + 2 = 10/3.

=> Total Value = −7/8 + 10/3 = (−21 + 80) / 24 = 59/24.

Therefore The correct answer is 59/24.

Additional Information

Standard Trigonometric Values for 30°

For 30°: sin = 1/2, cos = √3/2, tan = 1/√3, cot = √3, sec = 2/√3, cosec = 2.

Pythagorean Identities

sin² θ + cos² θ = 1 | 1 + tan² θ = sec² θ | 1 + cot² θ = cosec² θ.

Reciprocal Relations

cosec θ = 1/sin θ, sec θ = 1/cos θ, cot θ = 1/tan θ.

Q76. Answer: (a) Middle Andaman

The correct answer is Middle Andaman.

Key Points

• Mount Diavolo, an important mountain peak in the Andaman and Nicobar Islands, is located in Middle Andaman.

• Mount Diavolo is the highest point of Middle Andaman Island.

• It has an elevation of 295 meters.

• Mount Diavolo (Mount Diavolo) is a mountain (class T - Hypsographic) in the Union Territory of Andaman and Nicobar Islands (Andaman and Nicobar Islands), India (Asia) with the region font code of Asia/Pacific.

• It is located at an elevation of 403 meters above sea level.

• Its coordinates are 12°42'0" N and 92°55'0" E in DMS (Degrees Minutes Seconds) or 12.7 and 92.9167 (in decimal degrees). Its UTM position is DV90 and its Joint Operation Graphics reference is ND46-14.

• A Mountain is an elevation standing high above the surrounding area with a small summit area, steep slopes, and local relief of 300m or more.

Additional Information

• The Andaman Islands are an Indian archipelago in the Bay of Bengal.

• These roughly 300 islands are known for their palm-lined, white-sand beaches, mangroves, and tropical rainforests.

• Duncan passage separates Little Andaman from South Andaman.

• The territory’s capital is the city of Port Blair.

• THE BARREN AND NARCONDAM ISLANDS, north of Port Blair, are volcanic islands [these are the only active volcanoes in

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India.

• Saddle peak (737 m) in North Andaman is the highest peak.

• State Animal of Andaman is the dugong (sea mammal) really endemic to Indo-Pacific seacoast areas, especially to the Andaman Islands.

Q77. Answer: (a) Nirmal

The correct answer is Nirmal.

Key Points

• In Nirmal district were Telangana's first rescue and rehabilitation centre for monkeys, launched in December 2020.

• The first rescue and rehabilitation centre for monkeys was launched in Telangana's northern district of Nirmal.

• The forest department has set up a campus in Chincholi village for housing up to 200 monkeys for a period of 10 to 15 days, after which they will be released in forest areas.

• Four special enclosures are readied with a capacity for 50 monkeys each.

• Monkeys captured by Gram Panchayat will be sterilized and housed at the campus and later released in interior forest areas identified by the department.

• "Adult female monkeys will undergo sterilization by laparoscopy and vasectomy will be taken up on adult male monkeys.

• That apart, they will be vaccinated and checked for diseases, if any.

• Nearly 50 per cent of monkeys in the wild are found to have tuberculosis.

• The treatment will be ensured and only disease-free monkeys will be released in the wild.

Q78. Answer: (d) Melatonin

The correct answer is Melatonin.

Key Points

• Melatonin hormone is secreted by the brain that helps to regulate sleep-wake cycles.

• Melatonin is a hormone primarily released by the pineal gland at night and has long been associated with control of the sleep-wake cycle.

• As a dietary supplement, it is often used for the short-term treatment of insomnia, such as from jet lag or shift work, and is typically taken orally.

• Evidence of its benefit for this use, however, is not strong.

• A 2017 review found that sleep onset occurred six minutes faster with use, but found no change in total time asleep.

• Side effects from melatonin supplements are minimal at low doses for short durations.

• Melatonin side effects are rare but may occur in 1 to 10 patients in 1000.

Additional Information

• Oxytocin is a hormone that acts on organs in the body (including the breast and uterus) and as a chemical messenger in the brain, controlling key aspects of the reproductive system, including childbirth and lactation, and aspects of human behaviour.

• Insulin is a peptide hormone produced by beta cells of the pancreatic islets.

• It is considered to be the main anabolic hormone of the body.

• It regulates the metabolism of carbohydrates, fats, and protein by promoting the absorption of glucose from the blood into the liver, fat, and skeletal muscle cells.

• Aldosterone is the main mineralocorticoid steroid hormone produced by the zona glomerulosa of the adrenal cortex in the adrenal gland.

• It is essential for sodium conservation in the kidney, salivary glands, sweat glands, and colon.

Q79. Answer: (b) Odisha

The correct answer is Odisha.

Key Points

• Raja Parba is a unique festival celebrating the onset of the monsoon and the earth's womanhood.

• It is celebrated in Odisha.

• The second day of the festival signifies the beginning of the solar month of Mithuna, during which the season of rains starts.

• It falls in mid-June, the first day is called Pahili Raja, the second day is Mithuna Sankranti, the third day is Bhudaaha or Basi Raja.

• The final fourth day is called Basumati snana, in which the ladies bathe the grinding stone as a symbol of Bhumi with turmeric paste and adore with flower, sindoor, etc.

• All types of seasonal fruits are offered to mother Bhumi.

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• The day before the first day is called Sajabaja or preparatory day during which the house, kitchen including grinding stones are cleaned, spices are ground for three days.

• During these three days, women and girls take a rest from work and wear new Saree, Alata, and ornaments.

• It is similar to Ambubachi Mela.

• It is believed that the mother Goddess Earth or the divine wife of Lord Vishnu undergoes menstruation during the first three days.

• The fourth day is called Vasumati Snana, or the ceremonial bath of Bhudevi.

• The term Raja came from the Sanskrit word 'Rajas' which means menstruation and when a woman menstruates, she is called 'Rajaswala' or a menstruating woman, and in medieval times the festival became more popular as an agricultural holiday marking the worship of Bhudevi, who is the wife of Lord Jagannath.

• A silver idol of Bhudevi is still to be found in the Puri Temple beside Lord Jagannath.

Additional Information

• Various festivals being celebrated across the Nations:

• Makar Sankranti: The festival of Makar Sankranti is being celebrated today when the Sun enters the Makar zodiac and the days begin to lengthen compared to nights.

• Pongal: In South India and particularly in Tamil Nadu, it’s the festival of Pongal which is being celebrated over 4 days at harvest time.

• Magha Bihu: In Assam and many parts of the North East, the festival of Magha Bihu is celebrated. It sees the first harvest of the season is offered to the gods along with prayers for peace and prosperity.

• Uttarayan: Gujarat celebrates it in the form of the convivial kite festival of Uttarayan.

• Maghi: In Punjab, Makar Sankranti is celebrated as Maghi. Bathing in a river in the early hours of Maghi is important.

• Saaji: In the Shimla District of Himachal Pradesh, Makara Sankranti is known as Magha Saaji. Saaji is the Pahari word for Sankranti, the start of the new month. Hence this day marks the start of the month of Magha.

• Kicheri: The festival is known as Kicheri in Uttar Pradesh and involves ritual bathing.

Q80. Answer: (c) Jharkhand

The correct answer is Jharkhand.

Key Points

• Kisan Fasal Rahat Yojana, which will replace (PMFBY) Pradhan Mantri Fasal Bima Yojna, has been launched by the Jharkhand state government in December 2020.

• Jharkhand CM Hemant Soren has launched Kisan Fasal Rahat Yojana on 29th December 2020 but it will take three months to come into effect.

• It is a compensation scheme aimed at providing security cover to Jharkhand farmers in case of crop damage due to natural calamity.

• It is a compensation scheme aimed at providing security cover to Jharkhand farmers in case of crop damage due to natural calamity.

• It will cover both land-owning and landless farmers.

• The Department of Agriculture, Animal Husbandry and Co-operative will be the implementing agency and it will work in association with a project management unit, which will be a consultancy firm that will take care of technical requirements.

• “Food safety, crop diversification, rapid development in agriculture and paving the way for competition,” are among the aims of the scheme.

• It is not an insurance scheme where premiums are paid.

Additional Information

• Pradhan Mantri Sampada Yojana :

• The Central Sector Scheme - SAMPADA (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters) was approved by the cabinet in May 2017 for the period of 2016-20 coterminous with the 14th Finance Commission cycle.

• It is a central sector scheme introduced by the Ministry of Food Processing Industries.

• It is a comprehensive package aiming to create modern infrastructure with efficient supply chain management from farm gate to retail outlet.

• It is a big step towards creating huge employment opportunities in the rural areas, doubling the farmers’ income, increasing the processing level, reducing wastage of agricultural produce, and enhancing the export of processed foods.

• Pradhan Mantri Garib Kalyan Yojana :

• It was launched in the year 2016 by PM Narendra Modi along with the other provisions of the Taxation Laws (Second Amendment) Act, 2016.

• It came into effect on 17th December 2016 under the Ministry of Finance.

• To provide an insurance cover of Rs 50 lakhs per health worker affected by COVID-19.

• The Central Government has given orders to State Governments to use the Building and Construction Workers Welfare Fund to provide relief to Construction Workers.

• To provide free resources of 5 kg wheat or rice and 1 kg of preferred pulses for 80 crore poor people for the next three months under the PM Garib Kalyan Anna Yojana.

• Shramev Jayate Yojana :

• It is also known as Pandit Deendayal Upadhyay Shramev Jayate Karyakram was launched by PM Narendra Modi in October 2014 under the Government of India.

• It was launched to support the 'Make in India' campaign for encouraging the manufacturing sector.

• It also aims to expand government support for imparting skill training to the workers.

• Candidates should have a thorough knowledge regarding the objectives and benefits of all the schemes under the Government of India

Q81. Answer: (c) Colin Mackenzie

The correct answer is Colin Mackenzie.

Key Points

• Colin Mackenzie was appointed as the first Surveyor General of India in 1815.

• In 1815, Colin Mackenzie was appointed as the first Surveyor General of India.

• He holds this post from 1815 to 1821.

• The Surveyor General of India is the Head of the Department of Survey of India, a Department under the Ministry of Science and Technology of the Government of India.

Additional Information

• Thomas Hickey was an Irish painter. Born in Dublin, Hickey was the son of Noah, a confectioner in Capel Street, and Anne Hickey.

• A younger brother was John Hickey, the sculptor.

• He was trained at the Royal Dublin Society Schools under Robert West.

• Hickey painted primarily portraits and genre scenes.

• Henry Walpole (1558 – 7 April 1595) was an English Jesuit martyr, executed at York for refusing to take the Oath of Supremacy.

• Colonel Colin Mackenzie CB (1754–8 May 1821) was a Scottish army officer in the British East India Company who later became the first Surveyor General of India.

• He was a collector of antiquities and an orientalist.

• He surveyed southern India, making use of local interpreters and scholars to study religion, oral histories, inscriptions, and other evidence, initially out of personal interest, and later as a surveyor.

• He was ordered to survey the Mysore region shortly after the British victory over Tipu Sultan in 1799 and produced the first maps of the region along with illustrations of the landscape and notes on archaeological landmarks.

• He was awarded a Companion of the Order of the Bath on 4 June 1815.

Q82. Answer: (d) Pangong Tso

The correct answer is Pangong Tso.

Key Points

• Pangong Tso is a salt-water lake.

• Pangong Lake, situated at a height of almost 4,350m, is the world's highest saltwater lake.

• Its water, which seems to be dyed in blue, stands in stark contrast to the arid mountains surrounding it.

• Extending to almost 160km, one-third of the Pangong Lake lies in India and the other two-thirds in China.

• Pangong Lake, one of the most famous lakes in Leh Ladakh, derives its name from the Tibetan word, "Pangong Tso", which means "high grassland lake".

• During winter the lake freezes completely, despite being saline water.

• It has a land-locked basin separated from the Indus River basin by a small elevated ridge but is believed to have been part of the latter in prehistoric times.

• The lake is in the process of being identified under the Ramsar Convention as a wetland of international importance.

• This will be the first transboundary wetland in South Asia under the convention.

Additional Information

• Kolleru Lake is one of the largest freshwater lakes in India located in the state of Andhra Pradesh and forms the largest shallow freshwater lake in Asia (with 245 sq km of the lake area and 302 sq km of total Ramsar designated wetland), 15 kilometres away from the Eluru and 65 km from Rajamahendravaram.

• It is located between Krishna and Godavari deltas.

• Kolleru spans two districts – Krishna and West Godavari.

• Nainital, also known as Naini Lake, is a natural freshwater body, situated amidst the township of Nainital in Kumaon.

• It is tectonic in origin and is kidney-shaped or crescent-shaped and has an outfall at the southeastern end.

• Nainital, along with other lakes of Kumaon, is integral to tourism and recreation in Kumaon.

• The lake is also an integral part of Kumaoni folklore.

• Nainital Lake in the Nainital district, often called the Lake District of India, is one of the four important lakes of Kumaon; the other three are Sattal Lake, Bhimtal Lake, and Naukuchiyatal Lake.

• Loktak Lake is the largest natural freshwater lake and ancient super volcanic caldera in India.

• The largest of all the phumdis covers an area of 40 km2 (15 sq mi) and is situated on the southeastern shore of the lake.

• Located on this phumdi, Keibul Lamjao National Park is the only floating national park in the world.

Q83. Answer: (b) Karnataka

The correct answer is Karnataka.

Key Points

• Dandeli Wildlife Sanctuary is located in Karnataka.

• Dandeli Wildlife Sanctuary is a birdwatcher's paradise, housing nearly 200 species of birds, most famous for the great hornbill (great Indian hornbill or great pied hornbill) and the Malabar pied hornbill.

• It is also the only known tiger reserve in India to report frequent sightings of the elusive black panther.

• It is also known to house the Indian sloth bear, the Indian pangolin, the giant Malabar squirrel, dhole, the Indian jackal, and the muntjac (barking deer).

• Sightings of the Indian elephant and the Indian peafowl are pretty common.

• The king cobra and the mugger crocodile (Indian crocodile) are the prime reptilians in Dandeli Wildlife Sanctuary.

• The forests in Dandeli are a mixture of dense deciduous trees interspersed with bamboo and teak plantations.

• The sanctuary is rich in flora and fauna.

Additional Information

• Kaziranga National Park is a protected area in the northeast Indian state of Assam.

• Spread across the floodplains of the Brahmaputra River, its forests, wetlands, and grasslands are home to the world's largest population of tigers, elephants, and the Indian one-horned rhinoceros.

• The one-horned rhinoceros, Royal Bengal tiger, Asiatic elephant, bison, and swamp deer are collectively known as the 'Big Five' of Kaziranga.

• In the year 1985, the park was declared a World Heritage Site by UNESCO.

• It has been declared a national park in 1974.

• Guindy National Park :

• Guindy National Park is a beautiful place, located in the Chennai district of the state of Tamil Nadu.

• The park is home to spotted deer, blackbucks, white bucks, river otter, hyena, bonnet monkey, civet cat, jackals, pangolin, hedgehog and common mongoose, etc.

• Guindy National Park was established in the year of 1976.

• Ranthambore National Park :

• Ranthambore National Park is located about 13.5 kilometers from the city of Sawai Madhopur in Rajasthan.

• It is a former royal hunting ground and home to tigers, leopards, and marsh crocodiles.

Q84. Answer: (c) Science and Technology

The correct answer is Science and Technology.

Key Points

• Shanti Swarup Bhatnagar Prize is associated with Science and Technology.

• The Shanti Swarup Bhatnagar Prize for Science and Technology (SSB) is a science award in India given annually by the Council of Scientific and Industrial Research (CSIR) for notable and outstanding research, applied or fundamental, in biology, chemistry, environmental science, engineering, mathematics, medicine, and physics.

• The prize recognizes outstanding Indian work (according to the view of the CSIR awarding committee) in science and technology.

• It is the most coveted award in multidisciplinary science in India.

• The award is named after the founder Director of the Council of Scientific & Industrial Research, Shanti Swarup Bhatnagar.

• It was first awarded in 1958.

• Any citizen of India engaged in research in any field of science and technology up to the age of 45 years is eligible for the prize.

• The prize is awarded on the basis of contributions made through work done in India only during the five years preceding the year of the prize.

• The prize comprises a citation, a plaque, and a cash award of Rs. 5 lakh.

• In addition, recipients also receive Rs. 15,000 per month up to the age of 65 years.

Additional Information

• Shanti Swarup Bhatnagar Prize is divided into seven disciplines, namely:

• Biological Sciences

• Chemical Sciences

• Earth, Atmosphere, Ocean and Planetary Sciences

• Engineering Sciences

• Mathematical Sciences

• Medical Sciences

• Physical Sciences.

Q85. Answer: (c) Gyanendro Ningombam

The correct answer is Gyanendro Ningombam.

Key Points

• Gyanendro Ningombamwas elected, unopposed, as the President of Hockey India in November 2020.

• Gyanendro Ningombam has been elected unopposed as the new President of Hockey India, replacing the former President Mohd Mushtaque Ahmad, who now moves to the senior vice-president position on the Executive Board.

• Hockey India recently held its 10th Congress and elections in New Delhi, with access to the video conference meeting being made available for members who were unable to travel due to COVID-19 restrictions.

• Ningombam is now the first President of Hockey India from the northeast region of the country and previously held the position of officiating President after Ahmed tendered his resignation in July.

• Now elected for a two-year term, he has previously served as the chief executive of Manipur Hockey between 2009 and 2014 and has been associated with the governing body for over a decade.

• He follows Ahmad's reign which included overseeing the hosting of the International Hockey Federation Men's World Cup in 2018.

Additional Information

• Harendra Singh is an Indian field hockey coach and former international player.

• He is a former head coach of India's men's, women's, and junior teams.

• In 1988, he joined the Mahindra & Mahindra team in Mumbai on the insistence of former India coach J. M. Carvalho.

• He switched to Air India in 1990 and later became the company's senior manager.

• Singh made his international debut at the 1990 Asian Games in Beijing, where India won silver.

• He represented the Indian hockey team in 43 matches before retiring at the age of 26 citing "too much politics in hockey."

• Mushtaq Ahmad (28 August 1932 – 23 April 2011) was a field hockey striker from Pakistan.

• He was born in Amritsar, India. He won the gold medal in the 1960 Summer Olympics.

• He scored against Australia in the first match of the Games.

• After the Olympics, he was granted a transferral along with his family to move to the United Kingdom.

• He died in London, England aged 82 on 23 April 2011.

Q86. Answer: (a) 1953

The correct answer is 1953.

Key Points

• The Central Government of India appointed the States Reorganisation Commission in 1953.

• Prime Minister Jawaharlal Nehru appointed the States Reorganisation Commission in December 1953, with the remit to reorganize the Indian states.

• The new commission was headed by the retired Chief Justice of the Supreme Court, Fazal Ali; its other two members were H. N. Kunzru and K. M. Panikkar.

• The efforts of the commission were overseen by Govind Ballabh Pant, who served as the Home Minister from December 1954.

• The States Reorganisation Commission submitted a report on September 30, 1955, with recommendations for the reorganization of India's states, which was then debated by the Indian parliament. Subsequently, bills were passed to make changes to the constitution and to administer the reorganization of the states.

Additional Information

• The States Reorganisation Act, 1956 was a major reform of the boundaries of India's states and territories, organizing them along linguistic lines.

• Although additional changes to India's state boundaries have been made since 1956, the States Reorganisation Act of 1956 remains the single most extensive change in state boundaries since the independence of India in 1947.

• The Act came into effect at the same time as the Constitution (Seventh Amendment) Act, 1956, which (among other things) restructured the constitutional framework for India's existing states and the requirements to pass the States Reorganisation Act, 1956 under the provisions of Part I of the Constitution of India, Article 3.

Q87. Answer: (b) Data science

The correct answer is Data Science.

Key Points

• Data science is an advanced discipline that teaches students how to analyze and find patterns in large amounts of data.

• Data science is a process in which the goal is to make better choices.

• To make better choices, data should be collected to properly analyze the situation.

• Once the situation has been analyzed, then data scientists can make decisions to improve various outcomes.

• Data science is a field of applied mathematics and statistics that provides useful information based on large amounts of complex data or big data.

• Data science, or data-driven science, combines aspects of different fields with the aid of computation to interpret reams of data for decision-making purposes.

Additional Information

• Computer science is the study of computers and computing as well as their theoretical and practical applications.

• Computer science applies the principles of mathematics, engineering, and logic to a plethora of functions, including algorithm formulation, software, and hardware development, and artificial intelligence.

• Computer programming is the process of performing a particular computation (or more generally, accomplishing a specific computing result), usually by designing/building an executable computer program.

• Programming involves tasks such as analysis, generating algorithms, profiling algorithms' accuracy and resource consumption, and the implementation of algorithms (usually in a chosen programming language, commonly referred to as coding).

• Software development is the process of conceiving, specifying, designing, programming, documenting, testing, and bug fixing involved in creating and maintaining applications, frameworks, or other software components.

• Software development involves writing and maintaining the source code but in a broader sense.

• It includes all processes from the conception of the desired software through to the final manifestation of the software, typically in a planned and structured process.

• Software development also includes research, new development, prototyping, modification, reuse, re-engineering, maintenance, or any other activities that result in software products.

Q88. Answer: (b) Dilli

The correct answer is Dilli.

Key Points

• Ustad Iqbal Ahmed Khan, a recipient of the Sangeet Natak Academy Award, belongs to the Dilli Gharana.

• Ustad Iqbal Ahmed Khan (1954 – 17 December 2020) was an Indian classical vocalist from Delhi Gharana.

• Khan was born in 1954 into a family with a rich musical pedigree.

• Ustad Chand Khan and Ustad Jahan Khan were his grandfathers from the maternal and paternal sides, respectively.

• He was raised under the Delhi Gharana of music.

• He began his musical performances at the age of four, guided by his grandfather and teacher, Ustad Chand Khan.

• He kept up the family traditions as an active promoter of Amir Khusro's musical works.

• He also composed music for popular serials and plays.

Additional Information

• The Gwalior Gharana is one of the oldest Khyal Gharana in Indian classical music.

• The rise of the Gwalior Gharana started with the reign of the Mughal emperor Akbar.

• The favourite singers of this patron of the arts, such as Miyan Tansen, who was the most famous vocalist at the court, came from the town of Gwalior.

• The Jaipur-Atrauli Gharana (also known as Jaipur Gharana, Atrauli-Jaipur Gharana, and Alladiyakhani Gayaki) is a Hindustani music apprenticeship fraternity (Gharana), founded by Alladiya Khan in the late-19th century. Evolved from the dhrupad tradition, but is known for khayal.

• This Gharana is known for producing acclaimed musicians like Kesarbai Kerkar, Mogubai Kurdikar, Mallikarjun Mansur, Kishori

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Amonkar, Shruti Sadolikar, Ashwini Bhide-Deshpande, and Pandit Mityunjaya Agadi.

• Consequently, this Gharana developed a reputation for its distinctive vocal aesthetics, raga repertoire, and technical aptitude.

• The Agra Gharana is a tradition of Hindustani classical vocal music descended from the Nahar Bani.

• So far, Nahar Bani has been traced back to around 1300 AD, during the reign of Emperor Allauddin Khilji of Delhi.

• The first known musician of this tradition is Nayak Gopal.

• The style prevalent in the Gharana was "Dhrupad-Dhamar". Ghagghe Khudabuksh (1790–1880 AD) introduced the "Khayal" style of Gwalior Gharana into Agra gharana which Khudabaksh learnt from Natthan Paribaksh of Gwalior.

Q89. Answer: (d) Dwayne Bravo

The correct answer is Dwayne Bravo.

Key Points

• Dwayne Bravo is the brand ambassador of SBOTOP, which is a global online betting platform.

• West Indies cricket icon Dwayne Bravo has become the first cricket ambassador for “SBOTOP” sportsbook brand.

• Isle of Man betting group Celton Manx has appointed the West Indies cricketer as the cricket ambassador for its flagship sportsbook.

• Dwayne Bravo has represented West Indies in all formats of cricket.

• Sbotop is a provider of online Sportsbook, Casino & Virtual gaming services; all accessible from your desktop, mobile, or tablet device.

• Dwayne John Bravo is a Trinidadian cricketer and a former captain of the West Indies cricket team.

• A genuine all-rounder, Bravo is a right-handed batsman and bowled right-arm medium-fast.

Additional Information

• Rohit Gurunath Sharma is an Indian international cricketer.

• He is the captain of the Indian national team in limited-overs formats and the vice-captain in Test cricket.

• He is the official Rhino Ambassador for WWF-India and is a member of People for the Ethical Treatment of Animals (PETA).

• He has worked with PETA in its campaign to raise awareness of the plight of homeless cats and dogs in India.

• Sushil Kumar is a former Indian wrestler.

• He carried the Indian flag at the opening ceremony of the 2012 London Olympics.

• His 2008 Olympic medal was second for India in wrestling and the first since Khashaba Dadasaheb Jadhav's bronze medal at the 1952 Summer Olympics.

• Bajrang Punia is an Indian freestyle wrestler, who competes in the 65-kg weight category.

• At the 2020 Tokyo Olympics, Punia won a bronze medal by defeating Kazakhstan’s Daulet Niyazbekov with a wide 8-0 margin.

• Punia is the only Indian wrestler to win 3 medals at the World Wrestling Championships.

Q90. Answer: (d) 2015

The correct answer is 2015.

Key Points

• Prime Minister of India, Narendra Modi, launched Atal Pension Yojana in 2015.

• Atal Pension Yojana formerly known as Swavalamban Yojana is a government-backed pension scheme in India, primarily targeted at the unorganized sector.

• It was mentioned in the year 2015 Budget speech by Finance Minister Arun Jaitley.

• It was launched by Prime Minister Narendra Modi on 9 May 2015 in Kolkata.

• Swavalamban Yojana was a government-backed pension scheme targeted at the unorganized sector in India.

• It was applicable to all citizens in the unorganized sector who joined the National Pension Scheme (NPS) administered by the Pension Fund Regulatory and Development Authority (PFRDA) Act 2013.

• Under the scheme, the Government of India contributed Rs. 1,000 per year to each NPS account opened in the year 2010–11 and for the next three years, that is, 2011–12, 2012–13, and 2013–14.

• The benefit was available only to people who joined the NPS with a minimum contribution of Rs. 1,000 and a maximum contribution of Rs. 12,000 per annum.

• The scheme was announced by the Finance Minister in Budget 2010–11.

• It was funded by grants from the Government of India.

Additional Information

• Pradhan Mantri Sampada Yojana :

• The Central Sector Scheme - SAMPADA (Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters) was approved by the cabinet in May 2017 for the period of 2016-20 coterminous with the 14th Finance Commission cycle.

• It is a central sector scheme introduced by the Ministry of Food Processing Industries.

• It is a comprehensive package aiming to create modern infrastructure with efficient supply chain management from farm gate to retail outlet.

• It is a big step towards creating huge employment opportunities in the rural areas, doubling the farmers' income, increasing the processing level, reducing wastage of agricultural produce, and enhancing the export of processed foods.

• Pradhan Mantri Garib Kalyan Yojana :

• It was launched in the year 2016 by PM Narendra Modi along with the other provisions of the Taxation Laws (Second Amendment) Act, 2016.

• It came into effect on 17th December 2016 under the Ministry of Finance.

• To provide an insurance cover of Rs 50 lakhs per health worker affected by COVID-19.

• The Central Government has given orders to State Governments to use the Building and Construction Workers Welfare Fund to provide relief to Construction Workers.

• To provide free resources of 5 kg wheat or rice and 1 kg of preferred pulses for 80 crore poor people for the next three months under the PM Garib Kalyan Anna Yojana.

• Shramev Jayate Yojana :

• It is also known as Pandit Deendayal Upadhyay Shramev Jayate Karyakram was launched by PM Narendra Modi in October 2014 under the Government of India.

• It was launched to support the 'Make in India' campaign for encouraging the manufacturing sector.

• It also aims to expand government support for imparting skill training to the workers.

• Candidates should have a thorough knowledge regarding the objectives and benefits of all the schemes under the Government of India

Q91. Answer: (b) Qatar

The correct answer is Qatar.

Key Points

• FIFA World Cup 2022 venue, Ahmad Bin Ali Stadium, which was built by Indian construction giant Larsen & Turbo is located in Qatar.

• Ahmed bin Ali Stadium, popularly known as the Al-Rayyan Stadium, is a multi-purpose stadium in Al Rayyan, Qatar.

• It is currently used mostly for football matches and it is the home to Al-Rayyan Sports Club and Al-Kharitiyath Sports Club.

• The stadium, built-in 2003, had a seating capacity of 21,282.

• The new Al Rayyan Stadium has a seating capacity of 40,740.

• The Ahmed bin Ali Stadium is one of eight stadiums being converted for the 2022 FIFA World Cup Qatar.

• The construction of the new stadium started in early 2016.

• This was done by the joint venture between Al-Balagh and Larsen & Toubro.

• After the World Cup, the stadium will be reduced to 21,000 seats.

• The inauguration of the stadium took place on 18 December 2020, which was Qatar's National Day, and exactly two years before the country hosts the 2022 FIFA World Cup final.

• The stadium was one of two venues used for the 2020 FIFA Club World Cup.

Additional Information

Name Of Stadium	Location
Wankhede Stadium	Mumbai, Maharashtra
Subrata Roy Sahara Stadium	Pune, Maharashtra
K.D. Singh Babu Stadium	Lucknow, Uttar Pradesh
Maulana Azad Stadium	Jammu & Kashmir
Kalinga Stadium	Bhuvaneshwar, Odisha

Q92. Answer: (c) Electric field

The correct answer is the Electric field.

Key Points

• The electric field is a vector quantity.

• It has both magnitude and direction.

• The magnitude of the electric field strength is defined in terms of how it is measured.

• Electric current is a scalar quantity.

• Any physical quantity is defined as a vector quantity when the quantity has both magnitude and direction but there are some other factors that show that electric current is a scalar quantity.

• Electric flux is a scalar quantity because it's the dot product of two vector quantities, the electric field, and the perpendicular differential area.

• The electric charge has only magnitude and no direction.

Additional Information

• Physical quantities can have different "sizes", as a scalar, a vector, or a tensor.

• Scalars :

• A scalar is a physical quantity that has magnitude but no direction.

• Symbols for physical quantities are usually chosen to be a single letter of the Latin or Greek alphabet and are printed in italic type.

• Tensors :

• Scalars and vectors and the simplest tensors can be used to describe more general physical quantities.

• For example, the Cauchy stress tensor possesses magnitude, direction, and orientation qualities.

Q93. Answer: (b) Norway

The correct answer is Norway.

Key Points

• Norway ranked first in the ‘Human Development Report 2020’ released by the United Nations Development Programme.

• India has dropped two spots on the Human Development Index (HDI), according to the 2020 Human Development Report published by the United Nations Development Programme released on Wednesday.

• Asia’s third-largest economy was ranked at 131 among 189 countries in 2019.

• The HDI is the measure of a country’s health, education, and standard of living and ascertains a nations’ average achievement in three basic scales of human development – education, life expectancy, and per capita income.

• In 2018, India ranked 129 (out of 189) countries.

• Top Five Countries That Topped The HDI: According to the report, Norway topped the Human Development Index, followed by Ireland, Switzerland, Hong Kong, and Iceland.

• Singapore was ranked 11, Saudi Arabia 40, and Malaysia was at 62 in the global index, representing the top bracket among the Asian countries with “very high human development”.

• Other countries that are put under “high human development” are Sri Lanka (72), Thailand (79), China (85) and Indonesia and Philippines (both 107), and Vietnam (117).

Additional Information

• India had ranked 112th among 153 countries in the Global Gender Gap Index 2020.

• The WEF published its first gender gap index in 2006.

• The Global Gender Gap Index benchmarks 153 countries on their progress towards gender parity in four dimensions:

• Economic Participation and Opportunity,

• Educational Attainment,

• Health and Survival and

• Political Empowerment

• India secured 168 ranks in the 12th edition of the biennial Environment Performance Index (EPI Index 2020)

• It measured the environmental performance of 180 countries and was released by Yale University on June 4, 2020.

• India’s rank was 177 (with a score of 30.57 out of 100) in 2018.

Q94. Answer: (d) Hypothalamus

The correct answer is Hypothalamus.

Key Points

• Hypothalamus parts of the body/glands maintain the body temperature.

• The hypothalamus is an important part of your brain that controls lots of your basic bodily functions.

• Some hypothalamus disorders lead to hormone and weight problems.

• It also maintains the body temperature.

Additional Information

• The thyroid gland is a vital hormone gland: It plays a major role in the metabolism, growth, and development of the human body.

• It helps to regulate many body functions by constantly releasing a steady amount of thyroid hormones into the bloodstream.

• The pituitary, a pea-sized gland at the base of the brain, produces a number of hormones.

• Each of these hormones affects a specific part of the body (a target organ or tissue).

• Because the pituitary controls the function of most other endocrine glands, it is often called the master gland.

• Adrenal glands, also known as suprarenal glands, are small, triangular-shaped glands located on top of both kidneys.

• Adrenal glands produce hormones that help regulate your metabolism, immune system, blood pressure, response to stress, and other essential functions.

Q95. Answer: (d) Meghalaya

The correct answer is Meghalaya.

Key Points

• In Meghalaya, the first-ever specialized ‘Ginger’ Processing Plant was revived in December 2020.

• North East’s first-ever specialized "Ginger" Processing Plant at district Ri-Bhoui in Meghalaya is being revived and is likely to become functional at the beginning of 2021.

• The only ginger processing plant of North-East India was established around 2004 but has remained non-functional for many years.

• The North Eastern Regional Agricultural Marketing Corporation (NERAMAC) has undertaken the responsibility of reviving it and initiated steps to operationalize the closed plant through PPP mode.

• The plant located at the Export Promotion Industrial Park (EPIP), Raja Bhagan, Byrnihat Hatt will not only process ginger but also help in preparing products such as waxed ginger, ginger paste, ginger powder, ginger flakes, ginger oil, among others.

• For the PPP mode, an operation and maintenance operator was selected through the tendering process and the work on setting up and reviving the plant is under progress.

• Moreover, the government has plans to set up 100 new fresh retail points in the North-East and fruit kiosks at Guwahati and other major towns of the North-Eastern region.

Q96. Answer: (a) Devarapalli Prakash Rao

The correct answer is Devarapalli Prakash Rao.

Key Points

• Devarapalli Prakash Rao was awarded the Padma Shri for social work in 2019.

• Devarapalli Prakash Rao (known as D Prakash Rao) (November 11, 1958 – January 13, 2021) was an Indian social worker from Odisha.

• He was awarded the Padma Shri by the then President on the occasion of India's Commonwealth Day in 2014 for the provision of education and blood donation for the poor and orphaned children living in various slums in Cuttack.

• He owned a tea shop.

Additional Information

• Professor Ramaswami Venkataswami is a plastic surgeon, founder of the Institute for the Research and Rehabilitation of Hand and the Department of Plastic Surgery of Stanley Medical College and Hospitals, Chennai, India.

• He founded the department in 1971 and headed it until 1991 when he retired from Government service.

• Narsingh Dev Jamwal is an Indian writer and playwright from Jammu, who has authored 48 books, including Sanjhi Dharti Bakhle Mahnu, which won the Sahitya Akademi Award in 1978.

• He received India's fourth-highest civilian award, Padma Shri for his contribution in the field of literature and education.

• Padma Shri also spelt Padma Shree, is the fourth-highest civilian award of the Republic of India, after the Bharat Ratna, the Padma Vibhushan, and the Padma Bhushan.

• It is awarded by the Government of India every year on India's Republic Day.

• Padma Awards were instituted in 1954 to be awarded to citizens of India in recognition of their distinguished contribution in various spheres of activity including the arts, education, industry, literature, science, acting, medicine, social service, and public affairs.

• It has also been awarded to some distinguished individuals who were not citizens of India but did contribute in various ways to India.

Important Points

• Padma Shri

• Padma Shri also spelt Padma Shree, is the fourth-highest civilian award in the Republic of India, after the Bharat Ratna, the Padma Vibhushan, and the Padma Bhushan.

• It is awarded by the Government of India every year on India's Republic Day.

• Padma Awards:

• Padma Vibhushan- Awarded for exceptional and distinguished service.

• Padma Bhushan- Awarded for distinguished service of a high order.

• Padma Shri- Awarded for distinguished service in any field.

Q97. Answer: (c) Buddha

The correct answer is Buddha.

Key Points

• Buddha’s foster mother Mahapajapati Gotami was the first woman to be ordained as a bhikkhuni.

• Mahapajapati Gotami was the foster-mother, step-mother, and maternal aunt (mother's sister) of the Buddha.

• In the Buddhist tradition, she was the first woman to seek ordination for women, which she did from Gautama Buddha directly, and she became the first bhikkhuni (Buddhist nun).

• Tradition says Maya and Mahapajapati Gotami were Koliyan princess and sisters of Suppabuddha.

• Mahapajapati was both the Buddha's maternal aunt and adoptive mother, raising him after her sister Maya, the Buddha's birth mother died.

• She was considered the kindest mother who raised Siddhartha as her own child.

Additional Information

• Bindusara, also Amitraghata or Amitrakhada or Amitrochates was the second Mauryan emperor of India.

• He was the son of the dynasty's founder Chandragupta and the father of its most famous ruler Ashoka.

• Ashoka, also known as Ashoka the Great, was an Indian emperor of the Maurya Dynasty, son of Bindusara, who ruled almost all of the Indian subcontinent from c. 268 to 232 BCE.

• Ashoka promoted the spread of Buddhism across ancient Asia.

• Arjuna, also known as Partha and Dhananjaya, is one of the major characters of the Indian epic Mahabharata and also appears in other ancient Hindu texts.

• In the epic, he is the third among Pandavas, the five sons of Pandu.

• The family formed part of the royal line of the Kuru Kingdom.

Q98. Answer: (c) CD Deshmukh

The correct answer is CD Deshmukh.

Key Points

• CD Deshmukh was the first Indian Governor of the Reserve Bank of India.

• Sir Chintaman Dwarakanath Deshmukh, CIE, ICS (14 January 1896 – 2 October 1982) was an Indian civil servant and the first Indian[5] to be appointed the Governor of the Reserve Bank of India in 1943 by the British Raj authorities.

• He subsequently served as the Finance Minister in the Union Cabinet (1950–1956).

• It was during this time that he also became a founding member of the Governing Body of NCAER, the National Council of Applied Economic Research in New Delhi, India's first independent economic policy institute established in 1956 at the behest of Prime Minister Jawaharlal Nehru.

• After their resignation from Union Cabinet, he worked as Chairman of UGC (1956–1961).

• He served as Vice-Chancellor of the University of Delhi (1962–67).

• He was also President of the Indian Statistical Institute from 1945 to 1964, Honorary Chairman of the National Book Trust (1957–60).

• He founded India International Center in 1959 and served as Lifetime President of it.

• He was also chairman of the Indian Institute of Public Administration.

Additional Information

• Morarji Ranchhodji Desai was an Indian independence activist and politician who served as the 4th Prime Minister of India between 1977 and 1979 leading the government formed by the Janata Party.

• Nawabzada Liaquat Ali Khan, widely known as Quaid-e-Millat and Shaheed-e-Millat, was a Pakistani statesman, lawyer, political theorist, and one of the leading founding fathers of Pakistan.

• Kshitish Chandra Neogy, also known as KC Neogy, was an Indian politician from West Bengal.

• He was a member of the Constituent Assembly of India, a member of the first Cabinet of independent India, and the chairman of the first Finance Commission of India.

• The Reserve Bank of India (RBI) is India's central bank and regulatory body and is responsible for the issue and supply of the Indian rupee and the regulation of the Indian banking system.

• It also manages the country's main payment systems and works to promote its economic development.

• Bharatiya Reserve Bank Note Mudran is one of the specialized divisions of RBI through which it mints Indian banknotes and coins.

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Q99. Answer: (a) .gif

The correct answer is .gif.

Key Points

• For web graphics .gif formats are used.

• There are three file formats for graphics used on the web: JPG, GIF, and PNG.

• The GIF and PNG image formats use what is called "index-colour".

• They store a minimized colour palette in the image file and keys to where those colours should be located in the image.

• File size for GIF and PNG images is generally related to the number of colours used. Commons numbers of colors are: 2, 4, 8, 16, 32, 64, 128, 256.

• The GIF and PNG image formats are ideal for images with flat colours (no gradients) and hard edges.

• Common examples of these types of images are logos, logotypes, and illustrations without gradients.

• The JPG image format was designed to efficiently store and compress realistic images and artwork (both in colour and greyscale).

• The JPG format does a very good job of compressing images with lots of colours and gradations in colours.

• The JPG format is not capable of saving any transparency.

• When saving images in the JPG format, you can choose the level of compression to balance the file size and image quality. The file

• size is directly related to the actual size (in pixels) of the image.

Additional Information

• A file with the DOCX file extension is a Microsoft Word Open XML Format Document file.

• DOCX files are used for everything from resumes and cover letters to reports, flyers, documentation, invitations, newsletters, and more.

• TXT is a file extension for a text file, used by a variety of text editors.

• There is no standard definition of a text file, though there are several common formats, including ASCII (a cross-platform format), and ANSI (used on DOS and Windows platforms).

• TXT stands for TeXT.

• The .exe file extension is short for “executable.”

• These files are most commonly used on Windows® computers to install or run software applications.

Q100. Answer: (d) President

The correct answer is President.

Key Points

• According to the Constitution of India, a Judge of the Supreme Court cannot be removed from office except by an order of the President.

• A Judge of the Supreme Court shall not be removed from his office except by an order of the President passed after an address by each House of Parliament supported by a majority of the total membership of that House and by a majority of not less than two - thirds of the members of that House present and voting has been presented to the President in the same session for such removal on the ground of proved misbehaviour or incapacity.

Additional Information

• Parliament may by law regulate the procedure for the presentation of an address and for the investigation and proof of the misbehaviour or incapacity of a Judge under clause (4).

• Every person appointed to be a Judge of the Supreme Court shall, before he enters upon his office, make and subscribe before the President, or some person appointed in that behalf by him, an oath or affirmation according to the form set out for the purpose in the Third Schedule.

• No person who has held office as a Judge of the Supreme Court shall plead or act in any court or before any authority within the territory of India.

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